

Maximum wind velocities.

Stations.	Date.	Velocity.	Direction.	Stations.	Date.	Velocity.	Direction.
Buffalo, N. Y.....	11	62	w.	North Head, Wash.....	14	70	sw.
Do.....	12	60	w.	Do.....	20	60	s.
Carson City, Nev.....	11	64	w.	Do.....	25	71	se.
Do.....	12	58	sw.	Do.....	26	57	s.
Do.....	13	58	sw.	Point Reyes Light, Cal.....	7	75	nw.
Do.....	14	60	sw.	Do.....	8	55	nw.
Do.....	15	60	w.	Do.....	9	59	nw.
Cheyenne, Wyo.....	8	55	nw.	Do.....	10	63	nw.
Do.....	11	66	w.	Do.....	14	61	s.
Chicago, Ill.....	11	55	sw.	Do.....	19	56	se.
Do.....	12	69	s.	Do.....	20	60	s.
Columbus, Ohio.....	11	56	sw.	Salt Lake City, Utah.....	12	57	nw.
Eastport, Me.....	7	52	ne.	Southeast Farallon, Cal.....	7	55	nw.
Havana, Cuba.....	21	52	e.	Do.....	10	52	nw.
Knoxville, Tenn.....	17	50	sw.	Tatoosh Island, Wash.....	1	66	s.
Mount Tamalpais, Cal.....	3	55	sw.	Do.....	3	64	e.
Do.....	7	56	nw.	Do.....	8	62	s.
Do.....	8	55	n.	Do.....	9	60	s.
Do.....	9	65	nw.	Do.....	11	68	e.
Do.....	10	65	nw.	Do.....	13	50	e.
Do.....	13	50	sw.	Do.....	17	74	e.
Do.....	14	57	sw.	Do.....	18	78	e.
New York, N. Y.....	24	59	nw.	Do.....	19	63	e.
North Head, Wash.....	1	61	se.	Do.....	21	54	s.
Do.....	3	53	s.	Do.....	25	62	s.
Do.....	4	51	se.	Do.....	27	50	e.
Do.....	5	84	se.	Do.....	28	52	e.
Do.....	8	90	se.	Winnemucca, Nev.....	11	60	sw.
Do.....	9	84	se.	Do.....	12	57	sw.
Do.....	11	72	w.	Do.....	14	58	sw.

ATMOSPHERIC ELECTRICITY.

Numerical statistics relative to auroras and thunderstorms are given in Table IV, which shows the number of stations from which meteorological reports were received, and the number of such stations reporting thunderstorms (T) and auroras (A) in each State and on each day of the month, respectively.

Thunderstorms.—Reports of 894 thunderstorms were received during the current month as against 481 in 1902 and 1770 during the preceding month.

The dates on which the number of reports of thunderstorms for the whole country was most numerous were: 16th, 206; 11, 150; 17, 113.

Reports were most numerous from: Missouri, 109; Ohio, 104; Tennessee, 64.

Auroras.—The evenings on which bright moonlight must have interfered with observations of faint auroras are assumed to be the four preceding and following the date of full moon, viz: 1st to 9th.

In Canada: Thunderstorms were reported from Port Stanley, 16. New Westminster, 20. Hamilton, Bermuda, 2, 3.

Auroras were reported from St. Johns, N. F., 18. Grand Manan, 9. Quebec, 9, 20. Montreal, 18. Kingston, 18. White River, 1. Parry Sound, 18. Port Arthur, 1. Minedosa, 18, 21, 23, 30. Medicine Hat, 18. Swift Current, 18, 21, 30. Edmonton, 1, 8, 21, 22, 23. Prince Albert, 15, 17, 18. Battleford, 17, 18.

DESCRIPTION OF TABLES AND CHARTS.

By Mr. W. B. STOCKMAN, Forecast Official, in charge of Division of Meteorological Records.

Table I gives, for about 137 Weather Bureau stations making two observations daily and for about 31 others making only one observation, the data ordinarily needed for climatological studies, viz, the monthly mean pressure, the monthly means and extremes of temperature, the average conditions as to moisture, cloudiness, movement of the wind, and the departures from normals in the case of pressure, temperature, and precipitation, the total depth of snowfall, and the mean wet-bulb temperatures. The altitudes of the instruments above ground are also given.

Table II gives, for about 2,800 stations occupied by voluntary and other cooperating observers, the highest maximum and the lowest minimum temperatures, the mean temperature deduced from the average of all the daily maxima and minima, or other readings, as indicated by the numeral following the name of the station, the total monthly precipitation, and the total depth in inches of any snow that may have fallen. When the spaces in the snow column are left blank it indicates that no snow has fallen, but when it is possible that there may have been snow of which no record has been made, that fact is indicated by leaders, thus (....).

Table III gives, for all stations that make observations at 8 a. m. and 8 p. m., the four component directions and the resultant directions based on these two observations only and without considering the velocity of the wind. The total movement for the whole month, as read from the dial of the Robinson anemometer, is given for each station in Table I. By adding the four components for the stations comprised in any geographical division the average resultant direction for that division can be obtained.

Table IV gives the total number of stations in each State from which meteorological reports of any kind have been received, and the number of such stations reporting thunderstorms (T) and auroras (A) on each day of the current month.

Table V gives a record of rains whose intensity at some period of the storm's continuance equaled or exceeded the following rates:

Duration, minutes..... 5 10 15 20 25 30 35 40 45 50 60 80 • 100 120
Rates per hour (ins.)..... 3.00 1.80 1.40 1.20 1.08 1.00 0.94 0.90 0.86 0.84 0.75 0.60 0.54 0.50

In the northern part of the United States, especially in the colder months of the year, rains of the intensities shown in the above table seldom occur. In all cases where no storm of sufficient intensity to entitle it to a place in the full table has occurred, the greatest rainfall of any single storm has been given, also the greatest hourly fall during that storm.

Table VI gives, for about 30 stations furnished by the Canadian Meteorological Service, Prof. R. F. Stupart, director, the means of pressure and temperature, total precipitation and depth of snowfall, and the respective departures from normal values, except in the case of snowfall.

Table VII gives the heights of rivers referred to zeros of gages; it is prepared by the Forecast Division.

NOTES EXPLANATORY OF THE CHARTS.

Chart I, tracks of centers of high areas, and Chart II, tracks of centers of low areas, are prepared by the Forecast Division. The Roman numerals show number and chronological order of highs (Chart I) and lows (Chart II). The figures within the circles show the days of the month; the letters *a* and *p* indicate, respectively, the observations at 8 a. m. and 8 p. m., seventy-fifth meridian time. Within each circle is also given (Chart I) the highest barometric reading and (Chart II) the lowest barometric reading at or near the center at that time, and in both cases as reduced to sea level and standard gravity.

Chart III.—Total precipitation. The scale of shades showing the depth of rainfall is given on the chart itself. For isolated stations the rainfall is given in inches and tenths, when appreciable; otherwise, a "trace" is indicated by a capital T, and no rain at all by 0.0.

Chart IV.—Sea-level pressure and resultant surface winds. The pressures have been reduced to sea level and standard gravity by the method fully described by Prof. Frank H. Bigelow on pages 13-16 of the REVIEW for January, 1902. The pressures have also been further reduced to the mean of the twenty-four hours by the application of a suitable correction, to the mean of the 8 a. m. and 8 p. m. readings, at stations taking two observations daily, and to the 8 a. m. or 8 p. m.

observation, respectively, at stations taking but a single observation. The diurnal corrections so applied will be found in Table 27, Volume II, Annual Report of the Chief of Weather Bureau, 1900-1901, pp. 140-164.

The isotherms on the sea-level plane have been constructed by means of the data summarized in chapter 8 of Professor Bigelow's Report on the Barometry of the United States and Canada, which can be found in the Annual Report of the Chief of the Weather Bureau for 1900-1901, Volume II. The correction $t_0 - t$, or temperature on the sea-level plane minus the station temperature, by Table 48 of the Barometry Report, is added to the observed surface temperature to obtain the adopted sea-level temperature.

The wind directions are the computed resultants of observations at 8 a. m. and 8 p. m. daily. The resultant duration is shown by figures attached to each arrow.

Chart V.—Hydrographs for seven principal rivers of the United States, prepared by the Forecast Division.

Chart VI.—Surface temperatures; maximum, minimum, and mean of these. Lines of equal monthly mean temperature in red; lines of equal maximum temperature in black; and lines of equal minimum temperature (dotted) also in black.

Chart VII.—Percentage of sunshine. The average cloudiness at each Weather Bureau station is determined by numerous personal observations during the day. The difference between the observed cloudiness and 100, it is assumed, represents the percentage of sunshine, and the values thus obtained have been used in preparing Chart VII.

Chart VIII. Isobars and isotherms at 10,000 feet. The mean monthly station pressure for each station has been reduced to the 10,000-foot plane by entering Table 53, "Reduction of pressure to the sea level, the 3500 and 10,000-foot planes," pages 789-988, Barometry Report, with the temperature argument t corresponding to θ_2 , and correcting the station pressure by the reduction $B_2 - B$ after applying the plateau correction, $C \cdot J \theta_2 H$, and the corrections for e and A .

The reduction is fully described in Professor Bigelow's Report on the Barometry of the United States and Canada, pages 772 to 786 of the Annual Report of the Chief of Weather Bureau for 1900-1901, Volume II. The reduction for obtaining B_2 may also be found by using gradients from the station pressure to the height of 10,000 feet as set forth on pages 18 and 19, of the MONTHLY WEATHER REVIEW for January 1902.

The isotherms on the 10,000-foot plane have been computed by using the gradients for temperature for each month and station as shown by the Summary Table of Normals, Table 48, Chapter VIII, of Professor Bigelow's Report on the Barometry of the United States and Canada.

Chart IX.—Isobars and isotherms at 3500 feet. The pressure and temperature data entered on this chart are found by the method described for the same data on the 10,000 foot plane.

Chart X.—The total snowfall. This is based on the reports from regular and voluntary observers, and shows the depth of the snowfall during the month in inches. In general, the depth is shown by lines inclosing areas of equal snowfall, but in special cases figures are also given.

Chart XI.—Depth of snow on ground at the end of the month.

When there is no snow the last two charts may be replaced by others.

TABLE I.—Climatological data for Weather Bureau stations, November, 1903.

Stations.	Elevation of instruments. Barometer above sea level, feet. Thermometers above ground. Anerometer above ground.	Pressure, in inches.		Temperature of the air, in degrees Fahrenheit.						Precipitation, in inches.		Wind.																						
		Actual reduced to mean of 24 hours.		Sea level, reduced to mean of 24 hrs.		Departure from normal.		Mean max. + mean min. + 2.		Departure from normal.		Mean maximum.		Mean minimum.		Greatest daily range.		Mean wet thermometer.		Mean temperature of the dew-point.		Mean relative humidity, per cent.		Total movement, miles.		Prevailing direction.		Maximum velocity.						
		Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Minimum.	Date.	Maximum.	Date.	Minimum.	Date.	Maximum.	Date.	Minimum.	Date.	Maximum.	Date.	Total.	Departure from normal.	Days with 0.1, or more.	Total.	Departure from normal.	Miles per hour.	Direction.	Date.	Clean days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Total snowfall.
<i>New England.</i>																																		
Eastport.	76	69	82	29.85	29.93	— .08	37.6	— 2.3	35.6	— 1.1	64	4	41	10	27	30	22	33	73	2.19	— 1.7	— 0.6	12	8,586	w.	n.w.	52	7	17	6	5.2	13.2		
Portland, Me.	103	81	117	29.86	29.99	— .05	35.8	— 2.2	67	4	43	10	27	25	26	28	30	26	71	3.59	— 2.6	— 2.0	9	5,994	n.w.	n.w.	34	12	11	5.3	2.8			
Concord.	298	70	79	29.67	30.01	— .05	34.6	— 2.7	71	4	44	10	27	25	24	28	31	29	71	1.40	— 1.04	— 2.1	8	3,647	n.w.	n.w.	24	12	10	6	4.5	0.3		
Northfield.	876	16	60	29.05	30.03	— .02	35.8	— 2.7	29	4	32	68	4	49	15	26	20	35	65	1.48	— 3.1	— 3.1	8	5,010	s.	s.	34	12	10	6	6.2	4.1		
Boston.	125	115	181	29.86	30.01	— .04	40.0	— 0.6	74	4	47	17	27	33	26	35	28	65	79	1.48	— 0.3	— 0.3	7	7,108	w.	s.	33	12	10	4.7	2.4			
Nantucket.	12	43	82	29.98	29.99	— .06	42.8	— 1.9	64	4	48	23	26	38	18	40	36	79	73	3.82	— 0.3	— 0.3	15	10,554	u.w.	u.w.	43	12	10	5.5	7.2			
Block Island.	26	11	60	30.01	30.04	— .02	42.0	— 2.9	67	4	48	22	27	36	23	39	34	72	7.27	— 1.4	— 1.1	11	13,061	u.w.	u.w.	44	12	10	5	9.4	3.6			
Narragansett.	10	38	—	—	—	—	39.4	— 3.6	71	4	49	22	26	30	26	31	32	68	68	2.31	— 1.8	— 1.8	9	6,049	n.w.	n.w.	36	12	10	5	11	3.0		
New Haven.	106	117	140	29.92	30.04	— .03	38.6	— 2.5	72	4	47	13	27	30	27	33	28	68	68	1.85	— 2.1	— 2.1	6	6,049	n.	n.	36	24	20	3	7	3.2		
<i>Mid. Atlantic States.</i>							41.9	— 2.8	73	4	45	12	27	29	31	32	30	71	71	1.51	— 1.6	— 1.3	9	4,664	n.w.	n.w.	25	11	10	9	5.0	0.7		
Albany.	97	102	115	29.95	30.06	— .02	36.5	— 2.7	71	4	44	12	27	29	31	32	29	71	71	1.65	— 1.3	— 1.1	11	4,163	w.	w.	25	12	9	7	14	0.7		
Binghamton.	875	79	90	29.10	30.06	— .03	34.2	— 3.3	67	4	42	7	29	26	34	31	30	66	66	2.26	— 0.1	— 0.1	11	9,881	u.w.	u.w.	59	24	17	6	8.0	4.0		
New York.	314	108	350	29.71	30.06	— .03	41.4	— 2.0	70	4	48	17	27	35	23	36	30	66	66	0.90	— 2.9	— 2.9	7	4,769	n.w.	n.w.	28	12	10	11	5.4	0.2		
Harrisburg.	374	94	104	29.70	30.11	— .00	39.6	— 2.8	72	3	47	17	27	32	28	34	32	69	68	0.88	— 1.9	— 1.9	7	4,769	n.w.	n.w.	28	12	10	11	6.4	0.2		
Philadelphia.	117	168	184	29.97	30.10	— .00	42.5	— 1.4	72	4	50	25	27	35	27	37	30	65	71	1.03	— 2.2	— 2.2	4	7,298	n.w.	n.w.	29	12	10	11	6.4	T.		
Scranton.	805	111	119	29.20	30.08	— .01	36.4	— 2.6	69	4	45	12	26	28	32	32	26	71	71	1.86	— 1.6	— 1.6	9	5,534	n.w.	n.w.	20	12	10	8	4.5	0.2		
Atlantic City.	52	39	48	30.03	30.09	— .01	42.1	— 2.6	73	3	50	16	27	34	27	38	33	74	74	1.86	— 1.6	— 1.6	9	5,534	n.w.	n.w.	20	12	10	8	4.5	0.2		
Cape May.	17	47	51	30.09	30.11	+ .01	44.0	— 2.6	70	4	50	20	26	38	23	39	31	74	74	1.93	— 1.4	— 1.4	6	6,102	n.w.	n.w.	27	12	10	7	3.4	T.		
Baltimore.	123	69	117	29.96	30.10	— .01	43.2	— 2.2	75	3	52	18	27	34	28	37	30	74	74	1.93	— 2.3	— 2.3	7	4,619	n.w.	n.w.	29	12	10	8	5.7	1.0		
Washington.	112	59	76	30.00	30.12	— .00	41.6	— 2.9	73	3	52	18	27	31	32	36	32	74	74	0.80	— 2.0	— 2.0	6	4,459	n.w.	n.w.	28	12	10	9	4.3	0.3		
Cape Henry.	18	11	58	30.08	30.10	— .00	46.8	— 5.1	76	17	58	20	30	41	46	42	71	71	2.61	— 1.0	— 1.0	7	10,625	n.w.	n.w.	48	12	10	9	5.7	0.1			
Lynchburg.	681	83	88	29.36	30.13	— .00	43.5	— 2.8	76	3	54	17	28	32	37	37	36	69	69	1.34	— 1.6	— 1.6	7	2,937	n.w.	n.w.	22	12	10	9	5.2	1.4		
Norfolk.	91	102	111	30.02	30.12	+ .01	47.1	— 3.2	78	4	54	23	28	42	47	42	72	72	2.14	— 1.0	— 1.0	5	5,972	n.	n.	31	12	10	7	5.4	0.1			
Richmond.	144	82	90	29.98	30.14	+ .02	44.8	— 3.6	76	4	55	20	27	35	31	32	70	70	1.40	— 1.0	— 1.0	6	3,404	n.	n.	28	12	10	5.3	0.4				
Wytheville.	2,293	40	47	27.69	30.15	+ .02	37.6	— 2.6	72	3	49	2	30	26	40	32	29	78	78	2.06	— 0.1	— 0.1	10	3,450	n.w.	n.w.	28	12	10	6	4.4	6.0		
<i>S. Atlantic States.</i>							51.4	— 2.6	73	4	55	18	27	31	33	36	33	76	76	2.06	— 0.8	— 0.8	2	5,530	n.w.	n.w.	28	12	10	7	5.3	0.1		
Asheville.	2,255	53	75	27.75	30.13	— .01	41.4	— 4.1	72	3	52	13	19	31	33	36	33	73	73	2.32	— 0.4	— 0.4	5	5,548	n.w.	n.w.	28	12	10	7	5.3	0.1		
Charlotte.	773	68	76	29.28	30.14	+ .01	47.6	— 2.3	76	3	50	17	27	39	35	36	36	76	76	1.43	— 1.6	— 1.6	4	4,397	n.	n.	27	12	10	7	5.5	T.		
Hatteras.	11	12	47	30.09	30.10	— .01	51.8	— 3.8	74	17	57	27	28	47	19	48	46	86	86	3.52	— 1.7	— 1.7	9	11,006	n.	n.	45	12	10	5	4.5	1.0		
Raleigh.	376	71	79	29.72	30.11	— .00	47.2	— 2.7	74	3	57	18	28	38	33	32	41	71	71	0.88	— 1.3	— 1.3	4	4,147	n.	n.	21	12	10	7	5.7	T.		
Wilmington.	78	82	90	30.02	30.10	— .02	50.9	— 3.7	78	1	60	21	28	42	33	44	40	73	73	1.03	— 1.4	— 1.4	11	5,449	n.	n.	28	12	10	7	4.5			
Charleston.	48	14	92	30.07	30.12	— .00	55.4	— 2.2	79	14	63	26	28	48	24	45	49	75	75	1.20	— 1.8	— 1.8	5	3,057	n.	n.	33	12	10	8	4.9			
Columbia, S. C.	351	167	175	29.74	30.13	+ .01	51.6	— 3.2	76	1	60	22	28	43	26	46	42	77	77	1.36	— 1.0	— 1.0	8	6,864	n.	n.	36	12	10	9	5.9			
Savannah.	65	79	89	30.04	30.11	— .01	56.4	— 1.4	81	13	65	22	28	48	28	49	44	73	73	1.84	— 0.4	— 0.4	6	9,775	n.	n.	27	12	10	7	4.3			
Jacksonville.	43	101	129	30.02	30.07	— .03	59.6	— 1.3	81	14	67	26	39	50	34	53	49	76	76	0.18	— 4.0	— 4.0	3	6,066	n.	n.	33	12	10	7	4.4			
<i>West Gulf States.</i>							56.1	— 0.3	73	2	55	18	27	41	31	43	38	73	73	3.05	— 0.5	— 0.5	11	9,081	n.w.	n.w.	42	12	10	7	5.5			
Shreveport.	249	77	84	29.87	30.15	+ .04	46.6	— 3.3	83	13	65	20	19	43	37	46	38	73	73	2.32	— 0.4	— 0.4	1	4,463	s.	s.	23	12	10	7	4.6			
Fort Smith.	457	79	94	29.64	30.13	+ .02	48.2	— 1																										

TABLE I.—Climatological data for Weather Bureau stations, November, 1903—Continued.

Stations.	Elevation of instruments.		Pressure, in inches.		Temperature of the air, in degrees Fahrenheit.						Precipitation, in inches.		Wind.																																	
	Barometer above sea level, feet.		Thermometers above ground.		Actual reduced to mean of 24 hours.		Sea level, reduced to mean of 24 hrs.		Departure from normal.		Mean max. + mean min. + 2.		Departure from normal.		Mean maximum.		Mean minimum.		Greatest daily range.		Mean wet thermometer.		Mean dewpoint.		Mean relative humidity, per cent.		Total.		Departure from normal.		Days with 01, or more.		Total movement, miles.		Prevailing direction.		Maximum velocity.		Clear days.		Cloudy days.		Average cloudiness, tenths.		Total snowfall.	
	Barometer above ground, feet.	Aneroidometer above ground.	Thermometers above ground.	Aneroidometer above ground.	Actual reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hrs.	Departure from normal.	Mean max. + mean min. + 2.	Departure from normal.	Date.	Maximum.	Minimum.	Departure from normal.	Mean maximum.	Minimum.	Mean minimum.	Greatest daily range.	Mean wet thermometer.	Mean dewpoint.	Mean relative humidity, per cent.	Total.	Departure from normal.	Days with 01, or more.	Total movement, miles.	Prevailing direction.	Maximum velocity.	Date.	Clear days.	Cloudy days.	Average cloudiness, tenths.	Total snowfall.															
<i>North Dakota.</i>																																														
Moorhead.....	935	54	60	29.07	30.13	+ .06	25.3	+ 0.2	+ 0.3	72	34	- 11	24	15	38	21	18	75	0.22	- 0.5	3	7,666	n.w.	35	se.	6	11	11	8	5.1	2.4															
Bismarck.....	1,674	16	29	28.29	30.14	+ .07	26.5	+ 0.6	+ 0.7	73	37	- 8	19	16	41	22	15	66	0.23	- 0.4	3	7,434	n.w.	35	n.w.	17	13	14	3	5.0	2.3															
Williston.....	1,875	14	44	28.04	30.10	+ .04	24.8	+ 1.3	+ 0.9	69	2	35	- 16	19	15	43	20	16	77	0.18	- 0.4	7	6,966	n.w.	45	n.	8	9	6	15	6.0	1.8														
<i>Upper Miss. Valley.</i>																																														
Minneapolis.....	99	208	.....	29.17	30.11	+ .05	29.8	+ 0.1	66	2	37	0	26	22	26	27	23	77	0.31	- 0.4	3	9,026	n.w.	38	n.	29	8	12	10	..	2.5														
St. Paul.....	837	102	122	29.17	30.11	+ .05	30.6	+ 0.7	72	23	0	26	23	28	27	23	77	0.35	- 0.8	5	6,471	n.w.	30	n.w.	29	11	7	12	5.2	2.9																
La Crosse.....	714	71	87	29.33	30.13	+ .06	32.7	+ 0.7	66	1	40	6	26	25	24	32	27	74	0.04	- 1.4	2	6,155	n.	28	n.	29	10	12	13	5.8	0.5															
Davenport.....	606	71	79	29.45	30.11	+ .03	36.2	+ 0.6	68	1	44	9	26	28	32	32	27	70	0.70	- 1.4	5	5,796	w.	30	w.	9	10	9	11	5.0	0.6															
Des Moines.....	861	84	99	29.20	30.16	+ .08	36.2	+ 0.2	69	1	44	10	17	25	28	32	27	70	0.31	- 1.4	2	6,769	n.w.	35	w.	9	10	11	5.7	0.1																
Dubuque.....	698	100	117	29.36	30.13	+ .06	34.4	+ 0.6	70	2	42	7	26	26	28	30	25	73	0.75	- 1.4	4	5,613	n.w.	32	n.w.	23	11	7	4	9.0	0.4															
Keokuk.....	614	63	73	29.45	30.13	+ .04	37.5	+ 1.3	67	3	44	11	26	30	33	38	28	75	0.87	- 1.2	5	5,867	n.	34	sw.	12	11	7	4	3.3	0.2															
Cairo.....	356	87	93	29.77	30.17	+ .05	44.5	+ 1.7	75	15	53	17	18	36	33	39	34	70	2.07	- 2.2	5	6,461	n.w.	38	s.	11	11	12	10	5.5	2.7															
Springfield, Ill.....	644	82	93	29.44	30.14	+ .04	38.3	+ 2.6	69	1	47	13	26	30	32	34	29	75	0.98	- 2.0	7	7,177	n.w.	31	s.	8	8	12	11	5.7	0.6															
Hannibal.....	554	75	109	29.55	30.14	+ .05	38.8	+ 1.4	70	3	48	7	27	30	37	37	32	74	1.28	- 0.8	5	6,958	n.	37	w.	11	12	11	11	4.4	3.9															
St. Louis.....	567	208	217	29.52	30.14	+ .04	41.8	+ 1.8	71	3	50	14	18	33	37	32	74	61	0.51	- 0.6	6	8,354	se.	44	n.w.	28	12	11	7	4.6	1.5															
<i>Missouri Valley.</i>																																														
Columbia, Mo.....	784	11	84	29.29	30.14	+ .05	39.9	+ 3.1	75	15	50	11	18	30	45	31	28	68	1.61	- 0.6	6	6,702	se.	35	sw.	28	9	14	17	6.0	1.4															
Kansas City.....	963	78	95	29.10	30.17	+ .08	41.2	+ 0.5	71	15	48	14	18	34	32	36	30	72	0.78	- 2.3	8	8,272	se.	36	n.w.	28	13	5	12	5.1	0.6															
Springfield, Mo.....	1,324	98	104	28.70	30.14	+ .04	42.6	+ 0.9	73	15	51	13	18	34	33	37	32	72	1.09	+ 0.0	5	6,876	s.	31	s.	10	9	9	11	5.7	1.3															
Topeka.....	81	89	.....	40.8	+ 0.4	73	15	49	12	18	33	35	35	35	35	35	71	1.81	+ 1.1	6	8,278	s.	38	n.w.	9	9	11	10	5.5	1.3															
Lincoln.....	1,189	75	84	28.83	30.13	+ .05	38.5	+ 4.4	64	8	46	8	17	31	31	27	69	71	0.96	- 0.4	3	7,501	n.w.	36	sw.	10	10	7	13	5.9	0.3															
Omaha.....	1,105	115	121	28.92	30.14	+ .06	38.2	+ 1.6	65	8	45	8	17	31	34	28	71	71	1.01	- 0.4	3	7,145	s.	37	n.w.	9	9	11	11	6.1	1.8															
Valentine.....	2,598	47	54	27.31	30.10	+ .02	35.4	+ 1.1	78	8	48	-	1	17	23	44	28	71	0.04	- 0.4	3	7,501	n.w.	36	sw.	10	10	7	13	5.9	0.3															
Sioux City.....	1,135	96	164	28.88	30.13	+ .05	34.7	+ 0.4	68	2	42	5	17	27	26	26	26	70	0.96	+ 0.1	4	10,559	n.w.	43	n.w.	9	9	14	13	6.3	6.9															
Pierre.....	1,572	43	50	28.44	30.16	+ .08	32.2	+ 0.3	72	3	42	2	17	23	39	26	20	73	0.52	+ 0.1	4	5,579	n.w.	32	n.w.	10	10	10	10	5.2	5.2															
Huron.....	1,306	56	67	28.70	30.15	+ .07	29.2	+ 0.3	71	8	41	-	9	26	18	39	24	20	73	0.37	- 0.2	4	8,620	n.w.	36	s.	20	8	7	15	6.2	3.8														
Yankton.....	1,233	42	49	28.77	30.13	+ .05	33.5	+ 0.7	70	2	42	0	17	25	30	30	30	70	0.70	- 0.0	5	5,985	n.w.	29	n.w.	28	7	13	10	5.6	5.5															
<i>Northern Slope.</i>																																														
Havre.....	2,505	46	53	27.39	30.12	+ .09	26.6	+ 3.3	75	2	37	- 29	18	16	43	23	20	80	0.50	- 0.1	7	7,257	sw.	48	sw.	9	11	13	13	6.4	4.8															
Miles City.....	2,371	42	50	27.53	30.12	+ .05	31.2	+ 0.1	71	7	40	- 12	18	22	42	27	25	86	0.26	- 0.1	7	4,437	s.	36	sw.	10	16	16	16	4.0	1.4															
Helena.....	2,110	84	94	25.84	30.17	+ .07	27.8	+ 3.7	65	7	36	- 16	18	20	29	23	18	74	1.09	+ 0.4	10	4,517	sw.	45	w.	30	4	20	7	24.5	16.7															
Kalispell.....	2,965	45	51	26.96	30.10	+ .03	28.8	+ 0.1	64	4	36	- 10	18	22	35	26	24	83	3.13	.....	14	4,344	w.	30	n.	14	4	20	7	4.4	0.3														
Rapid City.....	3,234	46	50	26.64	30.12	+ .01	40.4	+ 0.4	72	27	45	-	3	17	23	45	28	21	68	T.	- 0.4	0	6,005	n.w.	36	n.	16	13	13	12	5.3	0.1														
Cheyenne.....	6,088	56	64	24.02	30.11	+ .04	36.6	+ 2.4	67	5	49	-	5	17	24	34	28	20	57	0.79	+ 0.5	0	5,120	n.w.	56	w.	11	13	13	12	4.2	7.2														
Lander.....	5,372	26	36	24.66	30.15	+ .05	34.0	+ 2.4	67	7	49	-	4	18	19	40	36	33	63	0.40	- 0.6	1	6,009	n.w.	34	n.	12	17	6	7	4.4	2.7														
North Platte.....	2,821	43	52	27.15	30.15	+ .07	42.4	+ 1.1	74	7	52	-	0	18	25	50	31	26	72	0.28	- 0.1	3	8,343	n.	42	n.w.	11	14	11	11	5.1	2.7														
<i>Middle Slope.</i>																																														
Denver.....	2,591	79	151	24.75	30.10	+ .04	41.1	+ 3.1	74	27	55	3	18	42	37	39	36	68	0.05	- 1.3	1	5,652	s.	45	n.w.	11	15	12	12	3.4	0.5															
Pueblo.....	4,685	80	86	25.33	30.12	+ .07	40.3	+ 1.5	77																																					

TABLE II.—Climatological record of voluntary and other cooperating observers, November, 1903.

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
<i>Alabama.</i>	°	°	°	In.	In.	<i>Arizona—Cont'd.</i>	°	°	°	In.	In.	<i>California—Cont'd.</i>	°	°	°	In.	In.
Anniston	82 ^a	18 ^a	52.6 ^a	0.91	In.	Phoenix	85	35	60.2	0.00	In.	Cederville	75	12	40.1	4.46	4.0
Ashville	77	17	48.0	1.57		Pinal Ranch	73	15	45.7	0.00		Chico	81	31	54.2	7.23	
Benton						Prescott	77	15	44.6	0.00		Cisco ^{*1}	53	18	38.5	16.90	16.0
Bermuda	82	20	54.4	1.46		St. Johns	77	15	45.3	0.00		Claremont	90	38	61.5	0.00	
Bridgeport						San Carlos	85	27	54.3	0.00		Cloverdale	76	33	54.6	10.11	
Burkeville						Sentinel ^{*5}	88	49	67.6	0.00		Colusa	73	34	54.4	3.60	
Calera						Signal	88	29	59.2	0.00		Corning ^{*1}	82	38	60.4	6.26	
Camphill						Superstition						Coronado	86	43	59.8	T.	
Citronelle	82	24	57.0	1.73		Taylor	75	16	44.2	0.00		Crescent City	65	34	52.0	21.73	
Clanton	82	18	52.2	0.30		Thatcher	83	23	53.6	0.00		Crescent City L. H.				20.53	
Cordova	81	16	49.3	1.27		Tombstone	82	36	59.6	0.00		Cuyamaca	67	26	46.6	0.04	
Daphne	80	25	58.4	1.15		Tonto	79	31	55.6	0.00		Delano ^{*1}	75	35	54.6	0.30	
Demopolis						Tucson	88	35	60.1	0.00		Delta ^{*1}	78	31	52.1	15.48	
Dothan	83	24	56.6	5.79		Upper San Pedro	84	26	54.0	0.00		Dobbins	79	35	55.8	12.41	
Eufaula	79	23	51.8	3.29		Vail ^{*6}	80	49	69.7	0.00		Drytown	73	33	52.4	6.38	
Eutaw ¹	84	21	51.2			Walnutgrove						Dunnigan ^{*1}	76	38	51.1	4.83	
Evergreen	85	22	51.7	2.49		Wilcox	80	22	50.8	0.00		E. Brother L. H.				4.25	
Floomatou	84	21	56.0	3.83		Williams	75	18	47.6	0.00		El Cajon	93	36	60.8	0.00	
Florence ^a						Yarnell						Elmdale	86	35	57.1	1.37	
Florence ^b	77	15	49.6	2.53		Young	81	19	49.0	0.00		Elsinore	96	29	60.2	0.00	
Fort Deposit	85	20	51.4	1.85		<i>Arkansas.</i>						Escondido	86	27	54.6	0.03	
Gadsden	79	18	49.2	2.20		Aleo	75	13	47.1	0.94		Fallbrook	86	36	59.2	0.05	
Goodwater	77	18	49.4	1.06		Amity	89	12	50.0	0.21		Fordyce Dam				19.47	11.0
Greensboro	79	21	52.4	0.54		Arkadelphia	81	11	48.4	0.10		Fort Bragg				5.98	
Greenville						Arkansas City						Fort Ross	66	38	53.4	15.97	
Haleyville						Beebranch	78	12	46.6	0.55		Foster				0.00	
Helena						Blanchard	82	13	50.2	0.41		Georgetown	75	30	51.7	17.71	
Highland Home	79	22	53.8	3.63		Brinkley	78	10	46.6	0.53		Gilroy (near)	77	30	55.2	2.24	
Lethoatchie						Camden ^a						Greenville				12.17	
Livingston	79	20	48.7	3.02		Camden ^b	82	20	48.9	0.37		Hanford	80	28	54.6	0.47	
Lotk No. 4	79	19	49.8	1.10		Conway	78	14	46.7	0.43		Healdsburg	75	32	54.2	14.53	
Madison Station	75	16	50.8	5.32		Corning	77	13	43.8	0.57		Hiland Springs				11.38	
Maplegrove	77	17	46.8	2.77		Dallas	75	13	49.5	0.08		Hollister	75	30	54.4	1.81	
Marion	80	21	51.6	1.25		Dardanelle						Humboldt L. H.				8.90	
Milstead						De Queen	81	14	49.1	0.10		Idylwild	78	18	50.1	0.00	
Newbern	82	19	52.4	0.95		Des Arc	81	13	48.8	0.70		Imperial	88	34	61.3	0.00	
Notasulga						Dutton	68 ^e	10 ^d	45.34	0.60		Indio	97	36	62.0	0.00	
Oneonta	77	15	48.0	0.39		Eureka Springs	73	12	45.0	0.81		Ione	88	32	54.9	6.42	
Opelika	77	21	49.4	0.59		Fayetteville	78	10	44.6	0.41		Iowa Hill ^{*1}	70	36	52.5	13.88	
Ozark	79 ^g	22 ^g	47.6	3.44		Forrest City	77 ^d	12 ^c	49.34	0.25		Jamestown	80	31	50.5	4.95	
Prattville	79	17	51.2	0.58		Fulton						Jolon				0.61	
Pushmataha	80	19	52.4	1.44		Hardy	85	13	46.8	0.74		Kennedy Gold Mine	70	28	47.3	7.20	
Riverton	79	12	48.8	3.88		Heber	80	11	46.6	0.41		Kernville				0.00	
Scottsboro	74	18	48.4	1.69		Helena ^a	80	17	49.6	0.86		Kentfield	67	35	54.5	14.61	
Selma	82	21	55.8	0.17		Jonesboro	79	13	47.4	1.82		King City	81	26	57.8	0.26	
Spring Hill	80	26	57.6			Lacrosse ^c	75	15	48.8	1.80		Laguna Valley				0.00	
Talladega	80	20	52.4	0.91		Lake Village	89	14	53.2	0.83		Lakeport (near)	69	39	52.8	5.29	2.4
Tallassee						Lonoke	78	12	47.8	0.05		Laporte	62	20	41.9	27.64	
Thomasville	79	21	52.4	0.72		Luterville	75	11	46.8	0.78		Legrande	80	30	53.4	1.11	
Tuscaloosa	78	19	48.8	1.00		Malvern	80	15	48.9	T.		Lemon Cove	90	34	59.5	0.32	
Tuskegee	81	21	53.8	0.66		Marvell	81	11	49.8	0.86		Lick Observatory	65	29	48.2	7.67	
Union Springs	79	20	52.3	1.90		Mount	68	10	42.8	1.21		Lime Point, L. H.				2.34	
Uniontown	83	16	52.4	1.17		Mossville	74	13	47.8	0.92		Livermore	81	31	55.6	2.16	
Valleyhead	78	12	47.2	3.53		Mount Nebo	74	13	47.8	0.32		Lodi	74	31	54.2	3.58	
Verbena						New Gascony	80	16	50.1	0.35		Los Gatos	74	33	54.4	4.94	
Wetumpka	84	19	53.6	0.24		Newport ^b	80	12	47.4	1.13		Mammoth	87	42	65.5	0.00	
<i>Alaska.</i>						Princeton	76	10	43.7	1.01		Mare Island L. H.				3.17	
Copper Center	35	-37	-3.6	0.20	3.0	Rison	79	8	46.2	0.47		Marysville	76	34	54.4	4.85	
Fort Liscum	42	4	23.3	5.62		Rosadaile	79	16	47.9	0.91		Meadow Valley				24.00	3.0
Killisnoo	50	15	33.5	3.65		Paragould	76	17	47.4	1.85		Merced	82	26	50.7	1.40	
Orcs	47	15	31.2	13.24	33.0	Perry	80	13	48.3	0.05		Mercury				14.26	
Sitka	54	16	36.4	6.50		Pinebluff	80	14	47.8	0.51		Mills College				7.02	
Skagway	44	10	28.1	1.60	3.5	Pocahontas	77	11	45.6	0.78		Milo				0.60	
<i>Arizona.</i>						Pond	72	7	44.0	0.87		Milton (near)	74	34	54.8	4.65	
Aqua Caliente	89	30	62.2	0.00		Prescott	84	19	51.0	0.05		Modesto ^{*1}	80	40	56.7	2.64	
Allaire Ranch						Rison	79	11	49.2	0.27		Mohave	85	24	56.8	0.00	
Arizona Canal Co's Dam	87	40	63.8	0.00		Rosadaile	84	14	50.6	T.		Mokelumne Hill				7.48	
Ashfork	80	12	45.4	0.00		Russellville	77	14	44.6	0.65		Monterey	82	32	58.0	1.55	
Astec	91	37	63.2	0.00		Silversprings	74	11	45.6	0.49		Monterey ^{*1}	69	37	55.5	2.17	
Benson	88	30	59.2	0.00		Spielerville	80	16	48.5	0.37		Napa	71	33	52.8	4.25	
Bowie	84	24	54.8	0.00		Stuttgart	80	10	49.6	0.54		Needles	86	55	69.6	0.00	
Cassgrande	90	37	63.0	0.00		Texarkana	88	15	52.6	0.00		Nevada City	76	26	49.8	13.48	
Champie Camp	90	33	61.3	0.00		Warren	82	12	50.6	1.34		Newcastle	78	32	52.0	7.65	
Cochise [*]	76	32	53.6	0.00		Washington	83	16	52.2	0.05		Ontario	78	31	55.8	1.06	
Congress	83	43	64.8	0.00		Wiggs	78	10	47.8	0.15		Ontario (near)	85	38	60.6	0.00	
Dragon [*]	85	35	51.6	0.00		Winchester	81	21	52.0	1.15		Orleans	74	34	53.8	18.41	
Dudleyville	89	26	58.0	0.00		Winslow	68	9	43.0	0.51		Oroville (near)	82	35	54.8	5.56	
Duncan	82	15	49.2	0.00		Witts Springs	77	2	41.6	0.96		Palermo	77	29	52.2	6.10	
Fort Apache	79	19	48.6	0.00		Bear Valley						Paso Robles	83	29	55.4	0.48	
Fort Defiance	65	8	38.2	0.00		Berkeley	64	39									

TABLE II.—Climatological record of voluntary and other cooperating observers—Continued.

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
California—Cont'd.	°	°	°	Ins.	Ins.	Colorado—Cont'd.	°	°	°	Ins.	Ins.	Florida—Cont'd.	°	°	°	Ins.	Ins.
Point Hueneme L. H.	62	44	54.8	2.97	0.00	Glenwood	66	0	35.4	0.02	0.2	Malabar	55	32	66.9	3.38	
Point Lobos						Greeley	74	-13	36.5	0.30	1.5	Manatee	52	29	65.1	2.70	
Point Loma L. H.						Grover	65	-8	30.4	0.02	0.5	Marco	59	36	68.0	T.	
Point Montara L. H.						Gunnison	74	-9	37.0	0.09	1.8	Marianna	50	23	65.6	7.26	
Point Pinos L. H.						Hamps	78	-2	40.8	0.27	3.0	Merritt Island	88	34	66.2	2.67	
Point Sur L. H.						Hoehne	81	0	43.7	0.29	0.2	Miami	88	38	71.6	3.70	
Porterville	82	33	56.6	0.09	0.02	Husted	69	-15	35.9	0.40	6.8	Micanopy	89	24	60.0		
Poway						Lake Moraine	54	-11	32.4	0.30	3.2	Middleburg	87	17	59.5	1.23	
Quincy	66	25	43.7	14.08		Lamar	81	-4	42.6	0.92	2.0	Molino	87	22	57.6	9.28	
Redding	75	36	54.0	13.97		Laporte			0.10	1.5		Myers	85	35	65.8	2.02	
Redlands	84	40	61.3	0.00		Las Animas	77	-14	38.6	0.33	4.0	New Smyrna	81	30	64.2	2.84	
Reedley	80	30	55.6	0.44		Leadville (near)	57	-4	30.9	0.37	9.0	Nocatee	89	28	66.8	2.83	
Repressa	70	36	55.4	6.42		Leroy	75	-5	38.0	0.06	1.0	Ocala	88	22	62.0	1.20	
Riovista	72	32	54.8	3.18		Longs Peak	55	-14	31.5	0.20	3.4	Orange City	93	25	63.8	2.00	
Riverside	87	38	59.1	0.00		Mancos	67	5	39.2	0.00		Orange Home	91	22	63.5	1.49	
Roe Island L. H.						Marshall Pass			1.07	10.0		Orlando	88	28	64.7	2.71	
Rohnerville						Meeker	67	-5	34.2	0.47		Pineountain	55	19	59.6	0.65	
Rosewood	75	29	51.1	6.98		Montrose			T.			Plant City	84 ^b	25	62.7	2.35	
Sacramento	69	34	53.6	3.89		Moraine	58	0	36.3	0.64	6.8	St. Andrews	80	22	58.2	5.71	
Salinas	77	30	56.6	0.96		Pagoda	68	0	36.1	0.46	2.0	St. Augustine	86	28	62.1	3.53	
Salton	86	39	62.8	0.00		Parachute	70	6	39.8	0.01	0.2	St. Leo	87	26	63.3	2.93	
San Bernardino	90	35	60.0	0.00		Platte Canon			0.13	1.5		Stephensville	87	25	58.0	T.	
San Jacinto	86	36	61.7	0.00		Rangely	72	0	35.0	0.10	1.5	Summer	88	26	60.2	0.73	
San Jose	70	35	55.9	0.99		Rockyford	76	-12	39.1	0.26	4.0	Switzerland	84	26	60.0	1.49	
San Leandro	69	36	54.0	5.78		Rogers Mesa	76	4	39.6	0.00		Tallahassee	81	27	59.2	5.14	
San Luis L. H.				0.66		Ruby			1.44	20.0		Tarpon Springs	88	26	63.5	2.57	
San Mateo* ¹	69	40	56.5	5.18		Saguache	61	1	35.2	0.00		Wausau	21		67.1		
San Miguel* ¹	76	27	54.3	0.37		Salida	67	-2	39.0	0.00		Wewahitchka	85	25	57.7	3.55	
San Rafael	70	32	54.6	9.51		San Luis	67	-3	36.3	0.00		Georgia.					
Santa Barbara	88	44	62.1	0.05		Santa Clara	68	-4	38.4	0.05	1.0	Abbeville	77	19	47.7	3.62	
Santa Barbara L. H.				0.03		Sapinero			1.33			Adairsville	77	19	47.7	1.12	T.
Santa Clara				1.70		Silt	68	5	39.0	0.05		Albany	88 ^b	20 ^c	57.2	3.31	
Santa Clara College	71	31	55.6	1.85		Sugar Loaf	63	-3	35.4	0.78	12.0	Allapaha	83 ^a	20 ^c	56.5	1.85	
Santa Cruz	75	32	54.2	8.59		Trinidad	74	6	44.2	0.09	2.0	Americus	79	22	53.2	4.73	
Santa Cruz L. H.				7.40		Villas			0.02	T.		Athens	74	19	48.7	1.76	
Santa Maria	82	38	60.3	0.19		Wagon Wheel	63	-6	29.6	0.00		Blakely	85	24	55.6	6.85	
Santa Monica	89	45	60.8	0.00		Wallet			0.13	2.0		Bowersville	78	16	49.6	1.65	
Santa Paula	82 ^c	30	61.4	0.00		Waterdale	73	-7	38.8	0.18		Butler	80		50.2	3.04	T.
Santa Rosa	77	32	53.6	9.65		Westcliffe	64	-3	35.0	0.02	0.4	Camak	79	18	50.2	2.96	
Sausalito				7.22		Whitepine	54	-13	27.0	0.42	9.1	Canton					
Shasta	76	35	52.0	19.67		Wray	81	-9	39.6	0.25	0.5	Carlton					
Sierra Madre	84	44	62.7	0.00		Yuma			0.36	1.0		Clayton	71	14	45.2	2.89	
Sisson	65	16	41.8	10.71	T.						Columbus	82	23	54.4	1.70		
Sonoma				6.38							Coney	83	19	54.1	5.08		
Sonora				4.98							Covington	76	17	49.8	0.99	T.	
S. E. Farallon L. H.				4.35							Dalhousie	72	13	46.2	1.76		
Stockton	70	33	52.7	3.06							Dawson	84	20	55.2	6.18		
Storey	80	30	54.4	0.95							Diamond	77	11	46.2	2.15		
Summerdale	70	27	47.8	5.90							Douglas	82	19	56.6	1.70		
Susanville	66	17	41.1	5.26							Dublin				0.22		
Tehama	78	37	56.2	5.86							Dudley	80	19	54.0	4.09		
Tejon Ranch	76	37	56.8	0.99							Eatonton	77	19	52.0	1.44		
Trinidad L. H.				12.82							Elberton	78	20	50.9	0.55		
Truckee	68	28	47.1	8.21							Experiment	77	17	49.8	1.06		
Tulare c	88	28	56.6	0.39							Fitzgerald	82 ^c	18 ^d	53.0	3.77		
Tustin	84	59	67.6	0.03							Fleming	87	17	56.6	1.00		
Ukiah	75	30	52.1	11.93							Forsyth	78	19	52.3	1.55		
Upland	82	38	59.5	0.00							Gainesville	72	17	47.0	3.10	T.	
Upper Lake	78	25	50.0	9.44							Gilliville	76	16	49.5	2.43		
Upper Mattole* ¹	71	33	50.5	29.77							Greensboro	80	18	48.6	2.22		
Vacaville* ¹	80	37	55.8	5.88							Griffin	79	18	49.8	1.51		
Visalia	85	30	55.0	0.35							Harrison	80	20	52.8	3.61		
Volcano Springs	93	39	64.4	0.00							Hawkinsville	80	19	52.5	3.94		
Wasco	82	29	55.6	0.25							Hephzibah				1.50	T.	
Weldon				0.00							Jesup	86	18	56.6	1.79		
Westpoint				9.52							Lost Mountain	75	16	48.7	2.97		
Wheatland	73	33	52.9	4.35							Louisville	78	18	52.4	2.39		
Willits	72	32	52.8	20.72							Lumpkin	84	20	55.0	3.98		
Willow	74	34	54.0	4.91							Marshallville	77 ^e		53.4 ^e	4.24		
Yerba Buena L. H.				4.10							Mauzy	84	19	57.4	3.48		
Zenia	74	26	47.9	21.63							Milledgeville	78	19	50.8	1.76		
Colorado.											Miller	82	23	54.4	1.44		
Alford	66	-8	37.6	0.26	3.0						Monticello	79	19	51.4	1.20		
Antelope Springs	59	-7	24.8	0.50	8.0						Morgan	80	20	53.8	5.90		
Ashcroft	61	-9	29.8	1.14	13.7						Naylor	85	19	57.0	0.30		
Blaine	83	-4	43.4	0.21	1.0						Newnan	50	17	48.8	1.59		
Boulder	75	2	42.8	0.15	2.2						Oakdale				3.49		
Boxelder				0.33	4.0						Point Peter	78	13	50.1	1.34		
Breckenridge	60	-17	30.8	2.29	32.0						Poulan	83	18	55.2	3.94	T.	
Buenavista				0.40	0.5						Putnam	81	21	53.0	3.98		
Burlington				0.40	0.5						Quitman	81	24	56.7	1.64		
Canyon	76	2	42.7	0.08	3.0						Ramsey	75	16	49.2	3.07		
Castlerock	78	-5	39.2	0.15	2.0						Resaca				1.66		
Cedaredge	70	6	40.7	T.							Rome						
Cheeseman	70	0	40.0	0.17	3.0						St. Marys	83	20	58			

TABLE II.—Climatological record of voluntary and other cooperating observers—Continued.

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.	
<i>Georgia—Cont'd.</i>																		
Woodbury.....	77	16	48.7	Ins.	0.62	Ins.	Raum.....	76	13	42.8	1.81	2.0	Afton.....	67	4	36.3	0.88	4.0
<i>Idaho.</i>							Riley.....	68	6	34.2	0.82	2.1	Albia.....	70	8	36.2	0.64	T.
Albion.....	68	0	38.4	1.95	13.0	Robinson.....	71	10	39.8	1.39	T.	Algona.....	70	3	36.1	1.74	2.0	
American Falls.....	68	5	35.6	1.22	.....	Rushville.....	69	11	38.0	0.37	T.	Allerton.....	68	2	32.2	0.62	1.0
Blackfoot.....	65	5	32.8	0.47	4.0	St. John.....	70	6	34.5	1.06	8.0	Anama.....	66	5	34.5	0.60	T.	
Blue Lakes.....	79	14	43.0	2.08	8.0	Shobonier.....	75	12	41.9	1.12	1.0	Ames.....	68	5	35.2	0.14	.....
Burnside.....	60	-5	31.4	0.70	7.6	Streator.....	73	8	37.2	0.78	0.2	Atlantic.....	67	4	36.4	1.24	6.0	
Cambridge.....	57	4	34.1	4.37	10.2	Sullivan.....	74	10	38.9	1.97	1.4	Audubon.....	66	-5	34.5	0.94	2.2	
Chesterfield.....	65 ^a	-5	31.24	0.68	5.0	Sycamore.....	71	5	33.6	0.97	2.5	Baxter.....	70	2	34.2	0.20	.....
Forney.....	70	-11	32.3	2.53	17.2	Tilden.....	75	13	41.7	2.05	2.0	Bedford.....	67	5	36.9	0.87	1.2	
Garnet.....	79	18	44.6	1.06	.....	Tiskilwa.....	69	8	35.3	1.27	0.2	Bellknap.....	75	9	41.0	1.51	.....
Grangeville.....	70	11	38.4	4.63	22.0	Tuscola.....	70	8	37.7	0.90	0.7	Bonaparte.....	68	8	35.6	0.94	0.5	
Lake.....	64	-8	37.6	0.90	9.0	Urbana.....	68	8	36.1	2.06	1.5	Britt.....	68	0	31.4	0.05	T.	
Lakeview.....	59	10	35.6	3.93	20.5	Walnut.....	70	9	36.4	0.53	0.2	Buckingham.....	72	-9	37.2	0.29	T.	
Lost River.....	61	0	30.9	0.97	8.0	Winchester.....	72	13	38.4	0.58	1.5	Burlington.....	72	5	34.4	0.84	T.	
Meadows.....	61	2	31.4	4.19	19.2	Winnebago.....	70	6	34.2	1.15	3.0	Carroll.....	73	-5	34.4	0.44	3.0	
Moscow.....	64	12	37.5	2.79	13.6	Yorkville.....	69	6	34.3	0.36	1.0	Cedar Rapids.....	67	7	33.8	0.48	.....
Murray.....	60	-2	32.8	7.19	40.0	Zion.....	69	5	34.0	1.13	T.	Chariton.....	69	4	36.0	0.11	0.1	
Oakley.....	70	6	40.3	1.40	11.5	<i>Indiana.</i>						Charles City.....	69	0	30.5	T.	T.	
Ola.....	64	6	37.8	4.36	8.2	Anderson.....	72	8	37.8	1.39	2.8	Clarinda.....	70	7	37.5	1.13	0.8	
Orofino.....	64	18	38.0	6.45	11.0	Angola.....	67	10	35.6	1.93	4.6	Clearlake.....	68	-2	30.4	T.	T.	
Payette.....	77	13	41.8	2.49	3.0	Auburn.....	71	5	35.2	0.93	.....	Clinton.....	67	8	35.0	0.78	0.3
Pollock.....	66	23	42.6	2.25	4.4	Bloomington.....	71	15	38.5	2.11	T.	College Springs.....	64	8	37.6	0.34	0.3	
Porthill.....	57	-2	32.3	3.09	8.0	Bluffton.....	74	6	37.0	1.64	3.0	Columbus Junction.....	70	7	36.1	0.74	0.2	
Priest River.....	58	1	32.8	5.40	20.0	Butlerville.....	76	5	39.6	2.06	3.6	Corning.....	65	-1	35.9	0.85	3.5	
Riddle.....	57 ^a	26 ^a	40.2 ^a	3.17	21.0	Cambridge City.....	71	6	35.3	1.97	2.5	Corydon.....	68	2	36.2	1.26	1.8	
St. Maries.....	72	15	37.5	4.30	10.7	Columbus.....	76	6	37.6	1.93	2.0	Council Bluffs.....	8		0.92		.....
Soldier.....	65	-18	27.6	3.32	28.0	Connerville.....	74	6	37.3	1.68	2.0	Cumberland.....	68		0.78	7.0		
Vernon.....	64	-1	31.7	.....	.....	Crawfordsville.....	74	8	36.8	1.58	2.0	Decorah.....	68	3	32.2	0.18	.....
Weston.....	67	-3	33.4	2.56	23.0	Delphi.....	77	10	36.0	1.35	3.5	Delaware.....	67	1	31.5	0.36	0.5	
<i>Illinois—Cont'd.</i>						Elkhart.....	70	12	36.9	1.85	8.0	Denison.....	67	-1	35.1	0.46	1.0	
Albion.....	75	11	40.2	1.41	2.7	Farmersburg.....	78	10	38.0	1.66	1.3	Desoto.....	67	3	35.4	1.04	1.0	
Aledo.....	72	7	36.1	0.98	0.2	Farmland.....	73	9	38.4	1.26	3.0	Dows.....	68	-1	32.4	0.10	T.	
Alexander.....	71	9	39.0	0.78	1.0	Fort Wayne.....	69	9	36.2	1.45	4.3	Earlham.....	72	2	32.4	0.21	T.	
Antioch.....	69	3	33.3	0.70	2.0	Franklin ^a	74	13	38.1	1.89	4.0	Elkader.....	72	2	32.4	0.21	T.	
Ashton.....	68	6	34.0	0.62	1.0	Greencastle.....	68	10	37.6	0.87	1.8	Esterhove.....	69	0	30.0	0.06	.....
Astoria.....	70	10	37.0	1.27	2.5	Greenfield.....	74	10	37.4	2.95	2.5	Fayette.....	69	-1	31.0	0.06	T.	
Aurora.....	68	5	35.4	0.54	2.5	Greensburg.....	76	6	38.4	2.99	5.0	Forest City.....	73	0	31.0	T.	T.	
Benton.....	74	13	42.6	0.98	0.2	Hector.....	70	5	34.6	1.25	4.0	Fort Dodge.....	68	5	33.0	0.41	.....
Bloomington.....	72	9	38.4	1.47	0.7	Holland.....	79	12	43.2	1.19	1.7	Fort Madison.....	69	-3	31.6	0.05	0.5	
Bushnell.....	71	10	38.0	1.37	.....	Huntington.....	72	11	37.2	3.53	7.0	Galva.....	69		0.18	T.	
Cambridge.....	68	8	34.6	1.09	.....	Jeffersonsville.....	71	15	41.6	2.40	0.8	Gilman.....	68		0.18	T.	
Carlinville.....	74	8	39.7	0.54	2.0	Kokomo.....	75	11	37.4	2.45	3.0	Glenwood.....	67	7	37.2	0.35	1.0	
Carrollton.....	70	9	33.5	0.28	2.5	Lafayette.....	73	10	36.2	2.34	3.3	Grand Meadow.....	68	2	31.2	0.28	0.5	
Centralia.....	85 ^a	13 ^a	40.6 ^a	0.47	1.2	Laporte.....	69	13	37.2	1.64	10.1	Greenfield.....	68	1	35.8	0.65	2.8	
Charleston.....	68	9	39.8	1.47	0.2	Logansport.....	74	12	36.6	1.67	1.8	Grinnell.....	64	3	33.9	0.24	T.	
Chester.....	.....	.....	1.07	T.	Madison a.....	74	13	40.6	2.02	0.4	Grinnell (near).....	66	2	33.4	0.25	T.	
Chicago Heights.....	76	11	41.0	0.81	1.0	Madison b.....	74	7	40.3	1.05	1.0	Grundy Center.....	68	0	33.3	0.21	T.	
Cisne.....	76	11	41.0	0.81	1.0	Princeton.....	75	12	42.5	1.96	0.4	Guthrie Center.....	68		1.32	1.2		
Coatsburg.....	70	7	36.6	0.88	T.	Rensselaer.....	75	11	43.2	1.69	0.4	Hampton.....	72	2	33.3	0.19	T.	
Cobden.....	77	14	43.5	2.22	1.0	Marion.....	75	9	37.4	3.06	2.5	Hanlontown.....	68	-1	31.2	0.08	0.4	
Decatur.....	69	9	38.8	1.74	1.5	Marseille.....	73	6	36.4	1.65	3.5	Harlan.....	66	1	35.0	1.02	7.2	
Dixon.....	69	11 ^a	36.1 ^a	0.73	0.1	Mauzy.....	75	5	36.4	2.31	3.0	Hopewell.....	69	1	35.2	0.78	.....
Equality.....	77	12	42.4	1.29	2.0	Moores Hill.....	73	6	38.8	1.61	3.8	Humboldt.....	69	2	34.6	0.08	.....
Fandon.....	69	11	38.6	1.41	2.4	Mount Vernon.....	77	13	41.8	0.51	2.5	Independence.....	69	1	32.1	0.16	T.	
Flora.....	73	9	39.4	0.83	1.4	Northfield.....	74	5	35.8	2.16	2.0	Indianola.....	69	3	35.9	0.73	1.2	
Friendsgrove.....	72	13	41.0	1.73	1.5	Paoli.....	74	7	40.3	1.05	1.0	Iowa City.....	72	6	34.2	0.97	.....
Galva.....	70	8	35.5	1.08	0.5	Pray.....	70	9	37.7	1.13	4.0	Iowa Falls.....	68	0	31.0	0.09	T.	
Grafton.....	.....	.....	0.53	2.5	Reed.....	75	4	37.4	3.06	2.5	Jefferson.....	68		0.23	0.8		
Greenville.....	78	11	39.8	1.10	3.0	Rensselaer.....	74	5	36.6	1.95	1.5	Keosauqua.....	68	9	34.5	0.74	0.3	
Griggsville.....	69	11	39.3	0.68	0.2	Rockville.....	70	8	38.0	2.04	2.1	Lacona.....	68		0.94	1.0		
Halfway.....	72	14	43.0	0.96	0.8	Rome.....	76	8	41.0	2.04	2.1	Larchwood.....	70 ^a	14	31.1 ^a	0.17	1.6	
Havana.....	76	11	38.1	0.89	0.5	Salem.....	76	8	41.5	2.23	2.0	Larrabee.....	69	-1	32.4	0.26	1.8	
Heury.....	71	9	37.2	1.69	2.0	Scottsburg.....	72	11	41.6	1.87	0.8	Leclaire.....	68	3	33.4	0.3	0.3	
Hillsboro.....	74	8	39.8	0.61	0.8	Seymour.....	70	10	40.8	1.85	2.0	Lemars.....	68	3	33.4	0.43	0.3	
Hooperston.....	70	7	35.6	1.80	6.0	Shelbyville.....	76 ^a	7 ^a	40.6 ^a	2.39	7.0	Lenox.....	66	2	35.9	0.43	1.7	
Joliet.....	69	10	36.0	0.86	1.9	South Bend.....	74	8	35.8	1.43	8.5	Logan.....	65	6	35.5	1.54	5.8	
Kishwaukee.....	72	5 ^a	32.6 ^a	1.25	4.0	Terre Haute.....	72	11	36.9	1.86	6.0	Maple Valley.....	68	4	32.8	0.79	1.5	
Knoxville.....	71	6	35.6	1.08	0.8	Topeka.....	70	10	36.2	2.32	2.0	Maquoketa.....	68	4	32.8	1.13	.....
Lagrange.....	6																	

TABLE II.—*Climatological record of voluntary and other cooperating observers—Continued.*

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
Iowa—Cont'd.						Kentucky—Cont'd.						Maine—Cont'd.					
Stockport.....	°	°	°	Ins.	Ins.	Anchorage.....	74	8	40.4	2.71	1.2	North Bridgton.....	°	°	°	Ins.	Ins.
Storm Lake.....	65	0	31.8	0.52	0.1	Bardstown.....	80	10	43.0	3.33	2.1	Orono.....	74	5	35.2	1.02	1.0
Stuart.....	65	6	34.0	0.84	1.5	Beattyville.....	76*	6*	38.1*	2.58	3.0	Patten.....	70	2	33.8	2.79	15.5
Thurman.....	62	7	37.3	1.05	0.2	Beaver Dam.....	77	10	43.0	3.55	1.2	Rumford Falls.....	70	4	32.8	0.98	2.0
Tipton.....	70	8	35.4	1.55		Berea.....	76	6	42.4	4.04	1.3	South Lagrange.....	68	2	31.6	1.85	11.0
Toledo.....	70	1	33.8	0.27	T.	Blandville.....	73	15	43.0	2.12	1.8	The Forks.....	.....	.....	1.73	9.5	
Villisca.....	62	7	34.5	0.99	3.0	Bowling Green.....	77	13	44.6	1.21	1.2	Vanburen.....	65	8	28.8	2.05	11.0
Vinton*1.....	69	3	33.4	0.20	T.	Burnside.....	76	11	43.2	3.59	1.0	Vanceboro.....	67	0	30.8	5.08	24.0
Wapello.....	68	9	37.0	0.79	0.8	Cadiz.....	75	14	43.8	4.20	2.0	Winslow.....	70	1	33.1	1.34	4.5
Washington.....	70	3	34.2	1.46	T.	Calhoun.....	75*	12*	41.8*	3.27	1.2	Maryland.	.....	.....	.....	.....	.....
Washta.....	70	2	34.0	0.19	T.	Catlettsburg.....	76	11	42.2	2.60	3.5	Annapolis.....	74	17	45.0	1.12	0.2
Waterloo.....	70	2	34.0	0.98	0.5	Earlington.....	76	13	44.7	3.89	1.8	Bachmans Valley.....	68	13	36.4	1.53	T.
Waukeee.....	69	2	32.8	0.08	T.	Edmouton.....	76	9	42.7	3.89	3.0	Boettcherille.....	82	13	39.3	0.88	1.0
Waverly.....	69	1	33.9	0.03	T.	Eubank.....	75*	10	40.6*	3.47	2.0	Boonsboro.....	74	18	40.5	1.06	0.5
Westbend.....	69	1	34.6	1.67	T.	Falmouth.....	.....	.....	.....	.....	.....	Cambridge.....	74	18	43.6	1.83	0.2
Wilton Junction.....	69	5	34.6	1.67	T.	Frankfort.....	72	10	41.9	3.14	3.0	Charlotte Hall.....	77	16	43.0	1.36	1.0
Winterset*1.....	66	1	35.4	.....	1.0	Franklin.....	70	16	44.9	3.35	1.5	Chase.....	74	11	40.6	0.91	0.5
Woodburn.....	70	3	34.2	1.04	1.5	Greensburg.....	76	13	39.4	3.39	0.5	Cheltenham.....	78	15	41.2	1.09	0.5
Kansas.						Hightbridge.....	74	13	42.7	3.94	3.5	Chestertown.....	68	17	41.1	1.17	0.2
Achilles.....	78	-2	29.3	0.75	T.	Hopkinsville.....	76	13	44.2	4.53	2.0	Chewsville.....	74	8d	35.7 ^b	1.19	0.6
Alton.....	68	5	41.2	1.27		Jackson.....	78	9	45.0	2.45	4.5	Clearspring.....	72	14	39.4	1.41	1.0
Anthony.....	68	12	41.0	1.58	1.2	Leitchfield.....	74	10	42.8	2.97	1.5	Coleman.....	74	18	43.8	0.79	T.
Atchison.....	65	9	38.2	1.42		Mayfield.....	73	17	44.8	3.32	1.6	Collegepark.....	78	12	42.8	.....	.....
Baker.....	65	9	38.2	1.42		Maysville.....	81	9	41.0	2.10	5.9	Colora.	.....	.....	1.10	T.	
Beloit.....	69	8	39.4	0.77	T.	Middleboro.....	78	7	40.5	2.32		Cumberland.	.....	.....	0.88	1.0	
Burlington.....	79	12	42.9	1.13	0.5	Mount Sterling.....	77	10	39.8	3.73	5.0	Darlington.....	74	13	41.0	0.93	T.
Chanute* ^a	74	12	43.0	0.74		Nerinx.....	75	5	41.8	3.10	T.	Deerpark.....	72	1	32.8	2.60	7.0
Clay Center.....	67	10	41.4	1.20	1.5	Owensboro.....	76	14	43.5	1.90	1.0	Easton.....	74	15	42.7	1.04	T.
Colby.....	80	-5	40.0	0.97	0.5	Owenton.....	71	11	40.3	2.76	3.0	Fallston.....	74	14	41.2	0.92	0.5
Columbus.....	73	12	42.9	0.58	0.5	Paducah a.....	77	18	45.8	2.26	2.0	Frederick.....	75	16	41.2	0.72	1.0
Cunningham.....	75*	7	43.2 ^a	1.00		Paducah b.....	77	15	45.3	3.96	2.5	Grauntsville.....	69	2	33.4	2.16	3.5
Dresden.....	73	2	40.9	0.91	T.	Princeton.....	76	15	43.0	4.45	1.0	Greatfalls.....	13	37.0 ^a	0.56	.....	.....
Eldorado.....	76	11	43.2	1.11		St. John.....	73	10	43.0	1.90	2.4	Greenspring Furnace.....	72	13	38.8	1.15	0.8
Ellinwood.....	69	7	42.2	0.87	T.	Scott.....	78	7	40.0	1.90	2.4	Hancock.....	77	13	39.4	0.91	0.2
Emporia.....	75	10	39.8	0.91	4.0	Shelby City.....	73	7	41.0	3.89	1.5	Harney.....	74	9	40.4	0.94	0.5
Euglewood.....	80	8	44.6	1.05	T.	Shelbyville.....	72	10	40.0	3.28	3.0	Jewell.....	73	16	42.6	0.98	T.
Enterprise.....	76	10	42.8	0.30	3.0	Taylorville.....	73	8	41.0	2.84	0.2	Johns Hopkins Hospital.....	74	18	44.4	0.95	1.5
Eureka.....	71	0	40.4	0.94	T.	Williamsburg.....	78	10	41.8	3.07	2.2	Laurel.....	75	11	40.2	0.98	0.5
Eureka Ranch.....	71	9	40.4	0.94	T.	Williamstown.....	76	8	41.8	1.95	1.0	McDonogh.....	74	14	41.2	.....	.....
Fall River.....	79	12	42.8	1.57	T.	Louisiana.						Mount St. Marys College.....	73	16	41.7	0.71	0.8
Farnsworth.....	72	-2	40.8	0.47	0.2	Abbeville.....	86	22	57.9	0.92		New Market.....	71	14	40.5	0.85	0.5
Fort Leavenworth.....	67	12	41.8	0.95	0.5	Alexandria.....	87	19	53.6	0.46		Oakland.....	73	1	33.7	2.15	2.0
Fort Scott.....	74	12	43.2	1.13	0.1	Amite.....	86	22	56.0	0.35		Pocomoke City.....	76	20	51.0	1.52	1.0
Frankfort.....	69	9	39.7	1.15	1.5	Baton Rouge.....	87	23	57.9	1.35		Princess Anne.....	75	17	42.8	2.21	0.4
Frederonia.....	77	10	41.8	0.92	T.	Burnside.....	86	22	57.6	0.86		Sharpsburg.....	72	16	41.5	0.85	0.5
Garden City.....	80	-2	43.6	0.40	1.0	Cameron.....	84	28	58.7	0.02		Solomons.....	71	20	44.6	1.57	1.0
Gove*1.....	71	4	39.8	0.72	2.0	Caspiana.....	86	13	54.3	0.23		Sudlersville.....	75	16	42.2	1.27	.....
Grenola.....	79	11	42.6	1.00	0.0	Cheneyville.....	87	18	52.7	0.00		Takoma Park.....	73	14	40.7	0.86	0.5
Hanover.....	65	.....	2.00	2.0	Clinton.....	84	23	55.9	0.55		Van Bibber.....	71	17	41.6	1.20	T.	
Harrison.....	65	7	39.0	1.10	0.5	Collinston.....	87	10	50.0	0.04		Westernport.....	73	14	37.7	1.29	0.8
Hays.....	70	4	39.6	0.88		Covington.....	87	24	57.1	0.62		Woodstock.....	71	17	42.0	0.64	0.2
Holton.....	71	9	39.8	1.40	2.0	Donaldsonville.....	88	25	60.2	0.65		Massachusetts.	.....	.....	.....	.....	.....
Horton.....	68	10	39.7	1.15	1.0	Emile.....	82	25	57.0	T.		Anherst.....	74	6	35.1	2.04	T.
Hoxie.....	72	1	40.4	0.93	T.	Franklin.....	87	28	59.2	0.40		Bedford.....	70	9	36.5	1.48	T.
Hutchinson.....	76	6	41.4	0.68	T.	Grand Coteau.....	85	22	57.3	0.77		Blue Hill (summit).....	71	9	36.8	1.20	4.0
Independence.....	76	12	43.7	1.27		Hammond.....	84	24	56.6	1.35		Cambridge.....	73	12	38.4	1.52	.....
Jetmore.....	72	2	40.6	0.60	T.	Houma.....	84	25	57.8	0.16		Chestnuthill.....	71	9	39.0	0.53	T.
La Crosse.....	72	4	40.8	1.29	T.	Jennings.....	86	23	55.0	0.44		Cohasset.....	.....	.....	2.05	1.0	
Lakin.....	79	4	42.0	0.36	0.5	Lafayette.....	85	22	57.0	0.55		Concord.....	74	6	35.4	1.61	0.7
Lawrence.....	78	12	41.4	1.74	3.0	Lake Charles.....	86	18	54.6	0.09		East Templeton*1.....	65	6	32.6	1.67	1.0
Lebanon* ^a	69*	41.4 ^a	1.00		Lakeside.....	85	25	57.8	0.23		Fall River.....	69	14	39.4	2.01	8.0	
Lebo.....	76	11	40.9	0.81	1.0	Lawrence.....	86	30	60.4	0.80		Fitchburg a*1.....	68	8	34.6	2.00	0.2
Macksville.....	76	8	42.6	0.45		Leesville.....	84	15	54.8	3.26		Fitchburg b*1.....	72	8	36.1	2.13	T.
McPherson.....	68	10	41.6	1.24		Libertyhill.....	84	15	54.2	0.18		Framingham.....	72	9	38.0	1.48	T.
Madison.....	77	11	41.6	1.71	1.0	Logansport.....	87	15	54.2	0.34		Groton.....	70	6	35.1	2.09	T.
Manhattan b.....	70	12	42.4	1.51	2.0	Melville.....	87	21	57.0	0.34		Holyoke.....	.....	.....	6.11	14.2	
Manhattan c.....	72	12	41.0	1.47	3.0	Minden.....	94	20	51.5	0.00		Hyannis.....	.....	.....	2.52	1.8	
Marion.....	67	11	42.9	2.10	T.	Monroe.....	85	20	53.1	0.16		Jefferson.....	73	9	36.7	1.33	1.0
Medicine Lodge.....	80	12	43.9	0.88		New Iberia.....	84	24	59.1	0.45		Lawrence.....	73	9	36.7	1.33	1.0
Minneapolis.....	65	9	40.6	0.66	0.5	Opelousas.....	87	18	55.8	0.47		Leominster.....	73	2	22.0	0.5	
Moran.....	75	10	42.8	0.97	1.0	Oxford.....	86	13	55.1	0.00		Lowell a.....	74	9	38.2	1.53	.....
Mounthope.....	70	15	44.4	0.76</td													

TABLE II.—Climatological record of voluntary and other cooperating observers—Continued.

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
<i>Michigan—Cont'd.</i>						<i>Minnesota—Cont'd.</i>						<i>Mississippi—Cont'd.</i>					
Ball Mountain	70	8	33.6	Ins.	1.75	Beauclerc	69	-21	24.1	0.32	5.0	Stonington	0	0	0	Ins.	Ins.
Baraga	76	8	30.4	1.95	8.0	Bemidji	67	-18	25.2	0.18	1.8	Suffolk	87	17	54.4	0.39	0.39
Battle Creek	70	6	33.7	1.95	3.5	Bird Island	68	0	28.6	0.34	2.0	Swartwout	86	25	59.5	1.11	
Bay City	70	12	33.6	1.95	3.5	Blooming Prairie	70	-3	29.3	T.	T.	Thornton	88	15	51.8	0.90	
Benzonia	61 ^b	11 ^b	31.3 ^b	3.06	13.5	Braainerd	69	-12	25.0	0.30	3.0	Tupelo	82	11	48.6	3.18	
Berlin	72	11	34.8	1.42	3.0	Caledonia	66	3	29.9	T.	T.	University	80	17	50.3	2.44	
Big Rapids	69	0	31.2	2.14	4.0	Collegeville	69	-1	29.6	0.08	0.6	Utica	86 ^j	17 ^d	55.84	0.03	
Birmingham	71	10	34.8	1.49	3.6	Crookston	66	-15	22.0	0.82	8.2	Walnut Grove	82 ^e	18 ^e	52.6	0.19	
Calumet	64	9	29.8	4.19	38.0	Currie	75	0	30.5	.....	.....	Watervalley	82	16	48.4	2.16	
Cassopolis	71	8	31.8	2.20	10.0	Deephaven	67	-18	22.6	0.30	3.0	Waynesboro	82	20	52.6	1.31	
Charlevoix	78	1	31.3	3.29	32.5	Detroit	67	-18	22.6	0.30	3.0	Westpoint	79	18	51.3	1.43	
Chatham	73	6	33.1	0.70	7.0	Duluth (sub station)	69	-7	25.6	1.15	10.7	Woodville	81	21	55.5	0.43	
Cheboygan	76	8	35.2	1.28	1.5	Fairbault	71	-3	29.8	0.12	0.1	Yazoo City	85	14	50.8	T.	
Clinton	76	8	35.2	1.28	1.5	Farmington	67	-2	28.2	0.40	3.0	<i>Mississippi—Cont'd.</i>					
Coldwater	74	9	36.1	1.90	5.0	Fergus Falls	67	-5	26.2	0.21	2.1	Appleton City	79	11	43.0	0.73	1.0
Deerpark	60	7	31.6	2.70	.....	Floodwood	69	-25	23.8	0.81	7.0	Arthur	75	11	42.6	1.90	
Detour	64	4	33.0	2.88	14.0	Glencoe	69	0	29.4	0.25	2.5	Avalon	9	9	1.94	0.5	
Dundee	70	8	35.6	1.63	1.6	Grand Meadow	69	-2	29.7	T.	0.2	Bethany	68	9	37.8	0.67	1.0
East Tawas ^c	73	13	32.0	1.49	.....	Hallow	72	-22	20.8	0.62	5.5	Birchtree	73	12	43.2	0.54	0.5
Eloise	77	8	35.4	1.02	2.2	Lake Winnibigoshish	67	-21	23.3	0.95	9.7	Blue Springs	70 ^e	10 ^e	40.78	0.2	
Ewen	68	3	26.8	1.35	13.5	Leech	72	-22	21.8	0.74	8.6	Bonneville	70	10	41.8	1.38	1.0
Fennville ^b	68	4	32.6	1.99	15.5	Long Prairie	68	-14	25.6	0.16	1.5	Brunswick	70	11	39.5	1.71	1.0
Fitchburg	71	5	34.2	2.21	3.5	Luverne	65	4 ^a	31.1 ^a	0.08	.....	Carrollton	68	11	40.6	1.43	T.
Flint	71	10	33.6	1.81	1.5	Lynd	68	0	29.5	0.22	3.0	Catheraville	78	15	46.6	3.26	
Frankfort	59 ^b	.....	1.05	4.0	Mapleplain	68	-4	28.8	0.48	3.9	Conception	67	8	37.8	2.81	1.0	
Gaylor	63	13	32.5	2.50	23.0	Milaca	70	-12	26.2	0.40	3.0	Darksville	69	9	40.2	0.50	1.0
Grand Haven	66	6	36.0	1.24	T.	Milan	70	-4	28.0	0.30	2.5	Dean	74	5	44.1	0.98	
Grand Marais	65	11	33.4	2.09	17.6	Minneapolis ¹	65 ^a	-2	28.8	0.22	1.9	Desoto	71	10	41.8	1.38	1.0
Grape	72	9	36.0	2.78	1.6	Montevideo	68	0	29.2	0.22	2.5	Downing	75	12	41.6	1.56	0.5
Grayling	70	2	30.8	2.20	18.5	Morris	70	-5	27.0	0.15	1.5	Edgell	75	12	41.6	1.56	0.5
Hagar	71	7	37.2	1.24	9.5	Mount Iron	68	-24	20.1	1.96	19.3	Eightmile ^e	16	43.2	1.33	T.	
Harbor Beach	70	6	32.6	2.27	7.0	New London	73	0	28.6	0.23	2.3	Fairport	73	14	42.0	1.69	0.5
Harrison	57 ^a	2 ^a	29.5 ^a	2.15	.....	New Richland	71	1	32.0	T.	T.	Fayette	77	10	41.8	0.59	0.5
Harrisville	74	10	33.0	1.66	4.9	New Ulm	66	2	29.9	0.15	0.8	Fulton	70	14	40.2	1.35	0.2
Hart	72	7	30.5	0.75	5.0	Park Rapids	67	-19	22.4	0.44	4.4	Gallatin ^{*1}	70	14	38.6	0.73	T.
Hastings	72	3	34.6	1.57	5.7	Pine River	68	-25	24.4	0.19	4.0	Gano	70	12	39.6	1.11	1.5
Hayes	65	10	34.8	1.45	4.0	Pipestone	65	-1	29.4	0.04	0.6	Glasgow	70	12	39.6	2.34	2.3
Highland Station	71	8	33.9	1.71	5.9	Pleasant Mounds	71	1	32.4	0.04	T.	Grant City	67	9	38.4	1.26	1.0
Hillsdale	71	8	33.9	1.58	5.5	Pokegama Falls	70	-37	20.1	1.10	9.8	Halfway	77	11	43.6	0.21	T.
Humboldt	70	-10	25.4	1.60	16.0	Redwing ^a	64	0	27.0	0.22	2.0	Harrisonville	70	12	39.8	1.77	T.
Ionia ^c	70 ^b	6	35.0	1.0	.....	Reeds	64	0	30.6	0.27	3.0	Hazlehurst	70	12	39.6	1.00	0.7
Iron Mountain	72	4	27.7	2.56	17.0	Rolling Green	68	5	31.0	T.	T.	Hermann	70	9	42.7	0.55	0.1
Iron River	70 ^f	-10 ^f	22.6 ^f	1.40	14.0	St. Charles	66	3	30.8	T.	T.	Houston	74	9	42.7	0.55	T.
Ironwood	69	0	27.4	2.09	19.6	St. Peter	71 ^e	0	28.4 ^e	0.10	T.	Huntsville	69	10	40.2	0.59	1.5
Ishpeming	70	-5	26.7	3.60	30.2	Sandy Lake Dam	70	-23	25.2	0.82	8.3	Ironton	76	9	42.0	1.48	0.5
Ivan	67	10	31.5	2.46	19.0	Shakopee	67	-2	30.4	0.30	2.0	Jackson	79	13	44.2	2.69	1.5
Jackson	75	8	35.6	1.43	5.5	Tower	37	-26	14.2	1.20	12.0	Jefferson City	75	11	40.7	0.56	0.5
Jeddo	69	10	34.3	2.95	13.2	Two Harbors	68	-12	27.0	0.95	1.0	Joplin	16	0	60.0	T.	
Kalamazoo	71	9	35.6	2.78	17.4	Wabasha	71	0	32.2	0.22	2.2	Kidder	67	9	38.4	1.45	0.6
Lake City	51	0	29.2	0.55	5.0	Winnebago	68	1	32.6	T.	T.	Koshkonong	74	12	44.2	1.40	0.2
Lansing	70	7	34.2	1.45	2.0	Winona	64	4	31.9	0.02	0.2	Lamar	74	12	43.6	1.15	
Lapeer	70	10	34.7	1.84	.....	Zumbrota	68	-1	30.0	T.	T.	Lamonte	74	12	43.6	1.31	T.
Ludington	62	17	35.0	1.20	12.0	<i>Mississippi</i> .						Lebanon	75	9	43.2	0.50	
Mackinac Island ^a	59	5	32.8	2.75	5.8	Aberdeen	79	16	47.0	2.49		Lexington	70	13	42.1	1.99	0.1
Mackinaw	65	7	33.2	1.80	7.0	Agricultural College	80	18	51.0	0.15		Liberty	70	11	40.7	1.28	0.2
Mancelona	62	4	31.2	1.20	12.0	Austin	79	13	48.2	0.60		Louisiana	73	5	39.0	1.09	3.0
Manistee	60	17	35.3	1.09	.....	Batesville	81	17	47.2	2.54		Macon	71	8	38.8	0.46	2.5
Menominee	62	4	31.2	2.09	12.5	Bay St. Louis	83	28	58.2	0.13		Marblehill	78	11	43.5	1.77	1.5
Mio	70	3	29.8	1.94	10.2	Biloxi	81	27	59.2	4.0 ^a		Marshall	70	11	40.2	1.39	0.4
Montague	62	0	34.4	1.78	7.0	Boggan	81	11	52.4	0.18		Maryville	65	9	36.4	2.09	0.5
Mount Pleasant	70	8 ^a	35.2	1.22	.....	Booneville	76	16	47.2	0.86		Mexico	72	9	39.6	0.47	2.0
Muskegon	70	2	30.4 ^a	1.20	12.0	Brookhaven	83 ^a	24	55.6 ^a	0.00		Miami ^{*5}	68	12	39.6	2.23	0.6
Old Mission	68	10	33.7	3.04	12.0	Canton	85	15	52.2	0.65		Mineral Springs	72	9	43.4	1.15	
Olivet	67	7	34.9	1.92	3.0	Columbus	77	20	49.4	5.51		Monroe City	73	2	37.0	0.62	2.2

TABLE II.—Climatological record of voluntary and other cooperating observers—Continued.

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.			
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		
<i>Missouri—Cont'd.</i>																			
Willowsprings	74	8	43.4	1.13	1.0	Ins.	75	9	42.0	1.46	0.5	Ins.	71	—	6	33.4	0.44		
Zetonis	75	9	43.4	1.13	1.0	Ins.	75	9	42.0	1.46	0.5	Ins.	71	—	6	33.4	0.44		
<i>Montana.</i>																			
Adel	66	—	36	27.5	1.30	13.0	Hayes Center	°	°	°	Ins.	67	—	6	33.4	0.44	T.		
Augusta	72	—	39	27.0	1.71	16.0	Hay Spring	71	—	6	33.4	0.21	T.	67	—	6	33.4	0.44	T.
Boulder	64	—	24	28.3	0.45		Hebron	67	8	39.0	1.35	3.0		67	5	41.0	0.00	0.77	
Bozeman	62	—	23	27.1	1.62	16.2	Hickman							69	10	38.8	0.00		
Butte	60	—	5	32.3	1.90	16.5	Holbrook	63	8	36.0	1.09	2.8		70	18	44.4	0.31		
Canyon Ferry	69	—	23	26.0	1.04	11.6	Hooper*1	63	8	36.0	0.59	0.5		72	20	46.9	0.00		
Chinook*	75	—	28	25.6			Imperial	76	—	5	38.8	0.55	0.2		60	4	32.6	0.98	6.0
Columbia Falls	65	—	6	25.2	2.21	7.5	Johnstown							60	14	35.8	0.00		
Crow Agency	70	—	22	30.4	0.95	5.0	Kearney	66	4	37.2	0.58			54	14	35.8	0.00		
Culbertson	76	—	15	25.9	0.12	0.2	Keunedy	78	—	5	35.8	T.		69	7	40.0	0.15		
Dayton	65	—	3	31.9	2.48	18.0	Lynch	74	3	33.3	1.04	8.0		66	4	37.2	T.		
Deerlodge	64	—	23	28.3	1.64		Lyons							69	8	39.6	4.82		
Dillon	64	—	18	31.4	1.52	13.7	McCook												
Ekalaka	70	—	12	29.2			McCool Junction												
Fort Benton	72	—	26	27.4	0.40	4.0	Madrid	61	5	37.0	1.45	4.0		76	0	33.4	1.87		
Fort Harrison	69	—	23	24.8			Marquette							71	—	2	31.2	1.10	
Glasgow	74	—	27	24.6	0.44		Mason							69	1	33.0	1.38	0.7	
Glendive	75	—	12	28.6	T.		Minden	65	3	37.9	0.91	0.2		76	8	37.0	2.04	T	
Greatfalls	70	—	25	31.6	0.83	8.3	Mouree							67	—	5	30.6	1.20	
Hamilton	65	—	6	29.0	0.63	19.0	Nebraska City c	65	9	38.8	1.30	1.0		65	—	5	32.8	3.5	
Kipp	68	—	35	24.4	0.70		Nemaha							69	1	31.7	0.99	0.8	
Lamedeer	73	—	20	32.6	0.35	2.5	Norfolk	67	2	34.5	1.09	4.0		73	—	1	32.4	1.80	
Lewistown	75	—	22	30.2	0.70	12.0	North Loup							63	5	28.8	1.29	4.0	
Livingston	68	—	20	34.1	1.44	12.0	Oakdale	63	3	34.3	0.66	2.9		70	3	34.8	1.92	0.5	
Marysville	62	—	18	26.6	3.13	32.0	O'Neill	75 ^t	0	36.3	1.52	6.5		76	8	37.0	2.04	T	
Missoula	65	—	5	30.3	1.34		Ord							67	—	5	30.6	1.20	
Ovando	63	—	23	24.4	1.49	11.0	Palmer							69	1	31.7	0.99	0.8	
Philipsburg	71	—	18	29.4	2.68	14.5	Palmyras*1	64	6	37.0	1.00	T.		73	—	1	32.4	1.80	
Plains	66	—	3	31.4	2.64	20.0	Pawnee City	75	10	40.6	1.84	1.0		74	15	42.9	1.09	2.0	
Poplar	75	—	14	26.0	0.35	3.5	Plattsburgh b	76 ^c	10	39.8 ^b	0.50	1.2		76	18	45.8	1.32		
Red Lodge	67	—	18	30.8	0.87	20.0	Purdum	75	—	1	36.2	0.80		73	14	41.0	1.05	T	
Ridgeway	70	—	12	26.7	0.15	1.5	Ravena	68	3	37.7	0.74	1.5		73	11	37.4	1.59		
St. Pauls	74	—	18	31.6	0.45	10.4	Ravena b							73	15	40.4	1.34	T	
St. Peter	66	—	18	30.2	0.92	18.0	Redcloud	67	6	38.8	1.18	T.		76	14	41.6	1.32		
Springbrook	74	—	12	29.4	0.73	2.2	Republican							76	10	37.0	1.30		
Toston	70	—	26	27.6	2.66	18.0	Rulo							75	15	42.2	0.94	0.75	
Troy	63	—	4	30.6	4.86	19.0	S. Library							72	—	4	32.3	2.03	T
Twin Bridges	64	—	24	26.5	0.90	9.0	St. Paul	66	—	4	38.8	1.01	1.5		74	15	42.9	1.09	
Utica	71	—	20	32.0	0.44	5.0	Salem							76	18	45.8	1.32		
Wolf Creek	64	—	25	29.2	1.08	13.8	Santee	66	3	35.2	0.89	6.5		73	14	41.0	1.05	T	
Wolsey	66	—	35	24.5	1.39	18.5	Schuyler							73	11	37.4	1.59		
Yale	69	—	21	27.7	1.90	19.0	Seward							73	15	40.4	1.34		
<i>Nebraska.</i>																			
Agate	71	—	13	33.8	0.18	1.0	Smithfield							74	15	42.9	1.09		
Agee*1	74	—	2	31.7	0.77	4.5	Sprague							76	18	45.8	1.32		
Albion	64 ^t	—	13	35.4 ^t	0.97	4.0	Springview	78	0	35.0	0.05	0.5		73	14	41.0	1.05	T	
Alliance	65	—	5	33.6	0.05	0.5	Stanton	62	4	35.4	1.34	5.0		73	11	37.4	1.59		
Ansley	70	—	3	35.6	0.60	1.0	Strang							73	15	40.4	1.34	T	
Arapahoe							Stratton							76	14	41.6	1.32		
Arcadia							Stromsburg							76	10	37.0	1.30		
Ashland a	64	8	38.7	0.50	2.0	Superior	62	6	38.8	1.49	1.5		75	15	42.2	0.94	T		
Ashland b							Syracuse							72	13	41.0	1.02	T	
Ashton							Tablerock							72	13	40.2	1.21	T	
Auburn	67	10	39.3	1.35	1.0	Tecumseh c	67	7	33.2	1.83	5.5		73	3	35.0	1.70			
Aurora							Turlington	66	8	38.6	1.81	3.0		73	14	41.4	1.18	T	
Bartley	71	—	1	38.2	0.41		University Farm	65	8	33.9	1.80	0.5		71	14	40.3	1.55	T	
Beatrice	65	8	38.6	1.67	2.0	Wahoo							71	14	40.6	1.09	T		
Beaver	69	2	40.1	0.71		Wakefield	66	2	35.0	1.76	3.1		78	10	41.1	1.18	T		
Bellevue						Wallace							72	13	41.0	1.02	T		
Benedict						Wauneta							72	13	40.2	1.21	T		
Benkelman						Weeping Water							73	3	35.0	1.70			
Blair	66	6	36.4	1.52	2.5	Westpoint	65	5	36.6	1.03	3.0		73	14	41.4	1.18	T		
Bluehill						Wilber							73	15	40.1	0.92	T		
Bradshaw						Wilsonville							73	14	40.6	1.09	T		
Bridgeport	78	—	6	36.6	0.11	1.0	Winnebago	66	0	37.1	0.72	2.0		78	6	37.6	1.38	T	
Brookenbow	69	1	37.8	0.40	T.	Wisner							73	7	38.0	0.94			
Burchard						Wynore							76	16	41.7	1.38			
Burwell						York	62	7	39.4	1.10	2.0		69	19	42.2	0.92	T		
Callaway	67	—	5	35.7	0.55	T.	<i>Nevada.</i>							72	10	38.7	1.17	T	
Central City						Austin	64	15	42.4	0.04			72	10	38.7	1.25	T		
Chester						Battle Mountain	80	13	44.0	0.90			73	9	37.3	1.25	T		
Columbus	63	6	37.2	0.90	T.	Belmont	59	10	39.8	0.00			75	9	39.4	1.13	0.8		
Crete	63	6	38.6	1.10	0.5	Beoware	73	18	42.4	1.05			76	15	41.8	1.32	T		
Culbertson	76	—	2	34.8	0.77	T.	Candelaria	67	23	47.0	0.00			76	13	40.0	0.85	T	
Curtis	68 ^t	—	2*	36.6	0.40		Eureka	69	10	43.5	T.			71					

TABLE II.—Climatological record of voluntary and other cooperating observers—Continued.

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.								
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.							
New Mexico—Cont'd.	°	°	°	Ins.	Ins.	New York—Cont'd.	°	°	°	Ins.	Ins.	North Dakota—Cont'd.	°	°	°	Ins.	Ins.							
Fort Bayard	76	16	50.1	0.00		Rome	64	6	34.1	3.11	13.0	Edgeley	72	-16	25.6	0.34	2.4							
Fort Stanton	74	6	43.8	0.00		Romulus	69	11	36.5	1.78	1.8	Elbowoods	76	-12	26.3	0.48	4.4							
Fort Union	82	5	44.4	0.00		Salsbury Mills	64	0	29.8	1.43	6.4	Ellendale	70	-5	29.8	T.	T.							
Fort Wingate	73	11	44.4	0.00		Saranac Lake	73	3	33.8	1.99	T.	Fargo	73	-15	23.6	0.10	0.9							
Fruitland	90	6	41.8	0.00		Setauket	69	20	41.0	1.32	T.	Forman	70	-6	26.3	0.05	0.5							
Gage						Shortsville	67	9	35.7	1.18	1.8	Fort Yates	72	-1	30.5	0.17	1.8							
Gallinas Spring	75 ^a	19 ^a	46.00	0.00		Skaneateles						Fullerton	72	-8	26.4	0.10	1.0							
Golden						Southampton	67	16	40.8	1.48	0.2	Glenullin	70	-4	29.0	0.22	1.4							
Lordsburg						South Butler	68	14	36.1	2.33	3.0	Grafton	69	-14	21.8	0.65	6.5							
Luna	70	10	39.2	0.00		South Canisteo	69	5	32.4	2.48	4.3	Hamilton	74	-18	20.8	0.86	8.6							
Mesilla Park	81	17	50.0	0.00		Southeast Reservoir						Jamestown	73	-7	26.0	0.32	2.0							
Mountainair	69	3	43.0	0.00		South Kortright	66	-5	31.6	2.23	2.0	Laramore	74	-12	23.9	0.40	4.0							
Raton	70	9	42.2	0.01	0.1	South Schroon	70	1	31.8	1.64	3.0	Lisbon	72	-9	26.8	0.10	1.0							
Roswell	85	10	49.6	0.00		Speer Falls	69	2	33.6	1.66	T.	McKinney	75	-18	23.4	0.45	4.5							
San Marcial	79 ^a	17 ^a	48.50	0.00		Straits Corners	71 ^c	2	30.2 ^c	1.91	5.0	Manfred	71	-10	25.3	0.28	3.3							
Strauss						Ticonderoga	66	10	35.7	1.21	3.5	Mayville	78	-12	27.4	0.39	3.4							
Winsors	69	-2	36.8	0.00		Volusia	65	10	33.6	5.54	26.7	Medora	70	-8	29.0	0.20	2.0							
New York.																								
Adams	72	8	34.6	1.84	2.5	Walton	68	-2	32.0	2.53	4.9	Melville	70 ^b	-8 ^b	24.4 ^b	T.	T.							
Addison						Wappinger Falls	69	10	37.2	2.66	1.0	Minnewaukon	72	-9	25.9	T.	T.							
Akron						Warwick						Minot	73	-14	21.8	0.30	3.0							
Aldeu	65	9	35.4	3.04	7.2	Watertown	60	3	33.4	2.37	12.0	Napoleon	74	-13	26.2	0.22	2.0							
Amsterdam	65	6	33.6	1.85	1.1	Waverly	70	10	34.1	2.30	4.5	New England	76	-10	27.6	0.25	2.5							
Appleton	69	14	37.4	1.39		Wedgewood	69	10	33.2	1.81	6.9	Oakdale	72	-7	30.1	0.40	4.0							
Arcade	65	-9	30.8	2.47	T.	Wells	68	-14	30.8	1.68	5.5	Park River	66 ^a	-13 ^a	21.4 ^a	0.54	4.5							
Athens	64	12	36.6	1.63	T.	West Berne	71	5	32.4	2.11	2.5	Pembina	74	-20	20.8	0.65	6.5							
Atlanta	69	4	33.2	1.84	3.0	Westfield b.	66	14	35.9	3.95		Portal	65	-13	22.0	0.90	9.0							
Auburn	69	14	36.3	2.95	14.0	Windham	69	4	33.8	1.76	T.	Power	73	-10	22.4	0.10	1.0							
Avon	67	10	34.0	1.56	0.5	Youngstown						Steele	62	-9	22.8	0.05	0.5							
Baldwinsville	67	8	35.9	3.93	21.0	North Carolina.																		
Bedford	72	11	39.1	2.79	T.	Brevard	71	9	42.6	2.29		Akron	70	13	36.6	2.39	7.7							
Berlin	65	4	33.6	1.85	T.	Bryson City						Atwater												
Bolivar	69	2	32.0	2.89	5.9	Chapelhill	81	15	47.2	1.71	T.	Bangorville	77	5	37.0	2.75	4.5							
Bouckville	65	6	32.0	2.32	9.5	Currituck						Bellefontaine	72	11	29.7	2.82	3.4							
Boyd's Corners						Edenton	76	24	48.8	1.96	4.0	Benton Ridge	70	11	37.2	1.74	5.5							
Brockport	65	15	35.4	1.56	5.7	Fayetteville	81	16	49.6	0.67	T.	Bladensburg	72	7	35.6	2.10	3.0							
Caldwell	64	6	34.4	1.40	2.5	Henderson	78	17	47.7	0.52	0.1	Bowling Green	72	8	36.3	1.42	4.0							
Cansjoharie						Hendersonville	72	12	42.4	2.42		Bucyrus	71	8	37.0	2.75	3.5							
Canaan Four Corners	63	5	32.8	2.45	T.	Henrietta	76	15	46.1	2.44	T.	Cadiz	72	10	37.0	4.11	5.1							
Carmel	67	10	35.6	3.35		Hightower						Cambridge	80	8	37.4	2.49	2.0							
Carvers Falls	66	7	33.2	1.51	1.0	Henderson	78	17	46.4	1.97	T.	Camp Dennison	74	8	38.4	1.80	2.4							
Chazy	64	5	33.3	1.51	0.1	Hendersonville	72	12	46.6	1.49	1.5	Canal Dover	70	9	35.6	2.20	4.5							
Cooperstown	63	2	31.3	2.21	5.0	Henrietta	72	12	42.4	2.42		Cardington	67	11	36.4	2.55	2.8							
Cortland	67	0	33.0	2.24	5.2	Holmes	76	17	46.4	2.18	0.1	Circleville	73	9	37.8	4.08	4.7							
Cutchogue	68	18	41.0	1.75	T.	Hornell	70	12	45.4	1.97	T.	Clarington	76	12	38.8	1.66	0.9							
Deansboro						Hudson	78	17	46.6	1.49	1.5	Clarksville	78	7	39.4	1.26	1.9							
Dekalb Junction	61	5	32.8	1.35	1.5	Jefferson	73	7	38.8	3.33	2.8	Cleveland a.	69	16	38.4	1.97	6.8							
De Ruyter	71	-3	32.4	1.92	7.9	Kinston						Cleveland b.	68	16	36.0	1.45	3.3							
Easton						Kittyhawk	74	26	49.7	2.49	T.	Clifton	75	8	38.2	1.97	2.0							
Elbe	64	13	35.3	1.47	T.	Linville	67 ^b	0	35.0 ^b	3.83	6.0	Coatlon	80	6	38.1	1.66	3.4							
Elmira	71	13	36.2	2.87	T.	Louisburg	76	14	45.6	1.52	T.	Dayton a.												
Fayetteville	68	2	35.2	2.15	7.5	Lumberton	76	15	47.6	0.35	T.	Dayton b.	76	10	38.2	2.44	2.1							
Franklinville	68	3	31.0	2.68	7.2	Marion	79	15	45.6	2.85	T.	Defiance	76	4	36.6	2.08	3.6							
Gabriels	68	-3	28.2	0.22	3.2	Marshall	72 ^a	12	38.6	3.42	7.0	Delaware	74	8	37.9	2.17	2.5							
Gaussevoort						Mocksville						Elyria	72	16	37.8	2.05	5.0							
Glens Falls	64	4	33.6	1.75	2.0	Mocure	80	13	49.0	0.64	T.	Findlay	76	9	37.8	1.46	1.5							
Gloversville	65	-1	32.1	2.54	1.2	Morganton	77	12	45.4	2.56		Frankfort	73	9	36.4	1.24	3.5							
Greenwich	63	6	32.6	1.81	1.0	Moutainary	78	12	42.8	1.27	0.2	Fremont	72	11	37.8	2.53	3.5							
Gritin Corners	68	-4	31.0	2.29	1.5	Murphy						Garrettsville	70	9	35.4	2.95	5.0							
Harkness	68	8	33.5	0.80	1.0	Newbern	79	18	49.1	1.57	T.	Granville	74	9	36.8	2.47	4.0							
Haskinville						Patterson	75	15	40.0	2.94	0.2	Hiram	74	2	35.0	2.78	14.5							
Hemlock	65	13	35.7	1.56	0.5	Pinchurst	80	16	49.7	0.62	T.	Hudson	68	14	35.6	2.46	6.5							
Honeymead Brook	64	8	35.1	2.31	1.0	Pittsburgh	80 ^a	16 ^a	48.0 ^a	0.55	T.	Jacksonboro	70	12	35.6	2.55	4.5							
Indian Lake	65	-9	28.5	1.33	4.2	Portsmouth	83	17	52.6	2.01	T.	Kenton	69	2	36.7	3.24	4.5							
Ithaca	65	9	34.7	1.83	3.5	Reidsville						Killbuck	72	7	36.3	1.79	3.5							
Jamesstown	70	-6	33.4	3.95	19.8	Rockingham	87	14	49.2	0.50	T.	Lancaster	74	11	38.6	1.78	4.0							
Jeffersonville	67	-1	34.0	3.00	1.5	Roxboro	77 ^a	13 ^a	48.6 ^a	1.79	T.	Lebanon	75	7	35.0	2.08	3.6							
Keene Valley	72	-1	31.2	0.84	1.9	Salem	75	14	44.2	2.15	T.	Medina	74	5	37.2	1.86	3.5							
King Ferry						Saxton	79	8	43.6	2.70	1.0	Millfordton	75	7	34.5	2.51	5.5							
Liberty	67	5	31.4	2.89	3.6	Selma	78	15	47.0	1.60	1.0	Milligan	78	7	37.0	1.92	3.0							
Littlefalls, City Res.	64	3	32.4	2.10	8.0	Settle * ^a	78	15	46.5	1.94	T.	Millport	71	9	34.8	1.90	1.0							
Lockport	62	14	35.2	1.43	1.8	Sloan	83	14	49.8	1.54	T.	Montpelier	69	9	35.4	2.30	5.5							
Lowville	64	-4	30.8	2.97	18.0	Southern Pines a	78	12	45.2	1.96	T.	Napoleon	72	10</td										

TABLE II.—Climatological record of voluntary and other cooperating observers—Continued.

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.			Stations.	Temperature. (Fahrenheit.)			Precipita- tion.			Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.			Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.			Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.	
<i>Ohio—Cont'd.</i>	•	•	•	Ins.	Ins.		<i>Oregon—Cont'd.</i>	•	•	•	Ins.	Ins.		<i>Pennsylvania—Cont'd.</i>	•	•	•	Ins.	Ins.	
North Royalton	70	12	37.4	3.54	17.0		Government Camp	79	7	36.6	15.04	61.0		Quakertown	73	11	39.4	1.38	T.	
Norwalk	72	9	37.4	1.64	2.5		Grants Pass	74	29	46.8	12.17			Reading	73	14	39.8	1.59		
Oberlin	72	11	36.0	2.48	6.8		Hood River (near)	72	20	38.2	2.15	0.5		Renovo	71	10	37.0	3.74	3.0	
Ohio State University	70	10	36.3	1.92	2.0		Huntington	66	14	39.6	3.38			Reno	72	0	34.5	2.98	5.8	
Orangeville	69	6	35.0	2.88	3.0		Jacksonville	75	26	45.7	10.64	0.2		Saegerstown	65	8	32.9	5.33	5.0	
Ottawa	74	8	36.6	2.16	5.0		Joseph	64	5	33.6	2.72	17.0		St. Marys				2.67	2.8	
Pataskala	73	9	36.4	2.27	2.2		Kerby	70	30	46.1	20.80			Saltsburg				1.59		
Philo	76	11	39.8	1.72	2.2		Lagrange	68	19	40.6	3.01	5.0		Seisbultzville						
Plattsburgh	74	7	37.3	2.89	5.0		Lakeview	70	6	37.5	4.94	4.0		Selinsgrove	76	11	39.2	1.53	T.	
Pomeroy	71	12	39.3	2.82	5.5		Langlois	70	31	52.6	19.48			Shawmont				1.01		
Portsmouth a				2.53	3.0		Lonrock	74	21	41.0	4.07			Smethport	70	2	32.2	3.23	T.	
Portsmouth b	73	10	39.9	2.52	3.0		McKenzie Bridge	67	24	42.1	15.34			Somers Corners				1.45		
Pulse	79	9	39.2	1.38	3.0		McMinnville	68	29	45.6	13.02			Somerset	71	7	33.1	1.62	3.4	
Richwood	75 ^c	8 ^c	36.6	1.82	2.5		Monroe	63	28	46.0	13.23			South Eaton	69	10	36.2	2.09	T.	
Rittman	74	10	36.5	2.14	2.5		Mount Angel	63	31	44.4	11.17	T.		Springmount				1.21		
Rockyridge	72	8	37.5	1.60	1.0		Nehalem							State College	66	10	36.0	1.89	1.5	
Shenandoah	72	6	35.2	1.77	4.5		Newport	65	37	49.4	12.61			Sunbury				0.50		
Sidney	75	8	38.2	1.85	2.4		Pine	68	4	36.4	6.14	14.0		Swarthmore	73	18	41.4	1.12		
Somerset	70	9	38.5	2.17	2.0		Prineville	75	17	40.8	2.08			Towanda	70	11	35.0	2.66	1.0	
Springfield			1.74	2.4			Salem	63	33	45.8	8.28			Trotrun				3.48	1.5	
Thurman	76	10	39.8	2.09	0.9		Sparta	66	13	39.0	5.70	41.0		Uniontown	73	13	37.7	2.15	2.0	
Tiffin	69	10	37.4	1.82	3.5		Stafford	66	32	44.4	14.06	0.5		Warren	68	7	34.2	2.71	9.1	
Upper Sandusky	70	11	37.4	1.56	3.6		The Dalles	66	26	42.4	4.44	6.5		Wellshoro	68	12	36.0	2.42	T.	
Urbana	68	7	35.4	2.35	3.5		Toledo	68	34	48.5	14.45			Westchester	73	14	40.8	1.40	T.	
Vickery	72	7	36.3	2.02	1.2		Vale	70	13	39.4	2.32	5.0		West Newton				2.30	2.0	
Warren	72	13	35.8	2.71	6.6		Wallowa	65	2	34.6	4.00	13.5		Wilkesbarre	67	13	36.6	1.98	T.	
Warsaw	76	6	35.6	2.15			Wanic	70	21	38.2	5.44	16.4		Williamsport	71	16	37.6	2.33	1.2	
Waueseon	71	9	35.5	1.84	3.2		Warm Spring	79	24	41.6	3.09	1.0		Windber				2.95	5.6	
Waverly	79	7	39.4	1.70	2.5		Weston	78	15	39.8	5.28	5.5		York	78	15	40.4	1.89	0.4	
Waynesville	70	7	38.3	1.93	2.5		Williams	75	25	46.6	12.36	2.0		<i>Rhode Island.</i>						
Wellington	71	9	37.0	1.97	9.0		Aleppo	72	7	36.6	2.03	T.		Bristol	65	16	40.2	1.98	2.0	
Willoughby			1.70	4.0			Altoona	72	10	36.9	1.82			Kingston	73	9	38.0	2.50	4.0	
Wilson	88	3 ^d	37.8	1.65			Athens	72	11	35.1	2.40	1.9		Pawtucket	74	14	40.4	1.60	0.2	
Wooster	71	9	36.8	2.25	5.4		Beaver Dam							Providence a	71	16	40.0	1.77	2.0	
Zanesville			2.35	2.6			Bellefonte	71	13	37.7	1.63	1.0		Providence c	72	14	38.8	1.84	2.0	
<i>Oklahoma.</i>							Brookville							<i>South Carolina.</i>						
Beaver	84	9	43.4	0.25	1.0		Browns							Aiken	82 ^d	19 ^d	49.8 ^d	2.90	T.	
Binger	87	10	47.4	0.02			Butler							Allendale	79	21	53.7	1.11	T.	
Chandler	80	13	46.8	0.45			California							Anderson	79	16	51.8	1.57		
Cloud Chief	80	8	47.2	0.03			Cassandra							Batesburg	85	19	51.0	3.17	0.7	
Eldorado	92	8	48.2	0.00			Centerhall							Beaufort	80	25	56.8	1.64		
Enid		12 ^c	45.2 ^c	0.55			Dushore	67	6	32.0	2.38	1.6		Benettsville	86	16	53.9	0.30	T.	
Fort Reno	88	10	46.9	0.00			East Bloomsburg							Blackville	83	19	53.1	1.63		
Fort Sill	83	10	47.0	0.00			East Mauch Chunk	74	8	37.0	1.26			Bowman	79	17	52.3	0.74	T.	
Grand			0.00				Easton	67	17	39.8	1.34	0.1		Calhoun Falls				0.46		
Guthrie	81	13	46.9	0.21			Ellwood Junction							Camden				1.42	T.	
Hennessey	85	11	49.7	0.33			Emporium							Cheraw a	80	14	49.5	0.63	T.	
Hobart	86	9	48.2	0.57			Ephrata							Cheraw b				0.61		
Jefferson	80	12	41.6	T.			Gordon							Clarks Hill	81	20	51.8	2.22		
Jenkins	86	10	45.4	1.13			Greensburg							Clemson College	84	16	49.4	2.43		
Kenton	77	5	45.2	0.10	1.0		Greenville							Coway	80	15	52.2	0.91	T.	
Kingfisher	87	12	47.2	0.77			Greenvale							Darlington	82	15	51.2	0.88	T.	
McComb	81	12	47.9	0.04			Heath Springs							Edisto				0.90	T.	
Mangum	90	15	51.1	0.30			Hedges							Flemington	80	17	51.4	0.89		
Meeker	79	19	47.5	0.75			Holiday							Gaffney	82	15	47.8	1.08		
Newkirk	80	6	42.0	0.55			Holiday Inn							Georgetown	72	26	49.0	0.7		
Norman			T.				Holiday Inn							Gillisonville	83	17	54.2	1.83		
Okeene			0.00				Holiday Inn							Greenville	74	16	45.5	1.95	T.	
Pawhuska	78	2	41.5	1.20			Holiday Inn							Greenwood	75	19	48.8	1.23		
Perry	83	12	46.0	0.81			Holiday Inn							Heath Springs	80	12	45.8	0.83	T.	
Sac and Fox Agency	85	11	47.8	0.45			Holiday Inn							Kingtree a	81	20	51.8	0.45	T.	
Shawnee	82	13	47.4	0.57			Holiday Inn							Kingtree b	79	15	50.0*	0.45	T.	
Stillwater	84	14	45.2	0.55			Holiday Inn							Liberty	76	14	48.8	2.28	T.	
Taloga	89	12	43.6	T.			Holiday Inn							Little Mountain	77	20	51.0	0.89	T.	
Temple	88	8	48.9	T.			Holiday Inn							Lions	78	12	50.0	2.21	T.	
Waukomis	85	13	48.2	0.50			Holiday Inn							Lugoff	80	13	49.8	1.21		
Weatherford	85	13	45.1	0.14			Holiday Inn							Pinopolis ¹	74	26	51.3	2.90		
Woodward	80 ^b	19 ^b	45.3 ^b	0.32	1.0		Holiday Inn							St. Georges	78	17	51.8	1.75	T.	
<i>Oregon.</i>							Holiday Inn							St. Matthews	78	16	51.6	1.39	T.	
Albany							Holiday Inn							St. Stephens	80	17	50.6	1.81	T.	
Alpha	68	28	46.2	19.96	0.2		Holiday Inn							Santuck	77	13	48.8	1.22	T.	
Arlington							Holiday Inn							Severn	88	15	50.2	1.30		
Ashland	77	27	46.6	8.10	2.5		Holiday Inn							Smiths Mills				0.86		
Astoria	64	34	46.8	12.45			Holiday Inn							Society Hill	78	17	49.4	0.42	T.	
Aurora (near)	62	30	44.4	10.47			Holiday Inn													

TABLE II.—Climatological record of voluntary and other cooperating observers—Continued.

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
<i>South Dakota—Cont'd.</i>																	
Cherry Creek.	70	— 5	29.8	0.43	5.0	Tennessee—Cont'd.	°	°	°	Ins.	Ins.	Texas—Cont'd.	°	°	°	Ins.	Ins.
Clark.	74	— 0	28.4	0.36	2.6	Wildersville.	72	16	46.5	3.58	Tulia.	83	8	48.1	0.00		
Clear Lake.	65	— 0	28.4	0.05	0.5	Yukon.	73	15	47.4	4.21	Tyler.	83	21	53.3	0.47		
Doland.	68	— 6	28.0	0.19	1.6	Teras.					Victoria.	86°	33°	62.1°	0.50		
Elkpoint.	76	— 4	36.0	1.57	8.0	Albany.	80	20	53.3	0.53	Waco.	88	24	56.3	0.00		
Fairfax.	72	5	34.0	0.40	4.0	Arthur.	84	27	58.4	T.	Waxahachie.	88	21	52.4	0.30		
Farmingdale.				T.	Austin ^a .	84	27	58.4	T.	Weatherford.	83	18	52.8	T.			
Faulkton.	69	— 1	28.8	0.48	5.5	Austin ^b .	81	23	56.7	7.	Wichita Falls.	83			0.00		
Flandreau.	71	— 1	29.4	0.38	3.8	Ballinger.	84	21	53.2	0.00	Utah.						
Forestburg.	72	— 10	30.4	0.87	5.1	Beaumont.					Alpine.	70	12	42.0	1.34		
Fort Meade.	74	— 4	33.2	0.80	8.0	Beeville.	95	34	62.9	0.14	Aneth.	70	5	39.4	0.10	1.0	
Gann Valley.	76	— 5	30.8	0.84	12.0	Bigspring.	87	15	54.4	0.00	Blackrock.	75	10	41.5	0.40	4.0	
Gettysburg.	64	— 2	28.8	0.15	2.0	Blanco.	87	26	54.6	0.00	Bluecreek.	74	1	35.9	0.16		
Grand River School.					Boerne ^{*1} .	90	25	56.1	T.	Callao.	70	3	34.8	T.			
Greenwood.	70	4	35.6	0.66	5.0	Bonham.	88	18	51.6	0.00	Castledale.	74	17	38.7	2.03	6.0	
Highmore.					Booth.					Corinne.	69	0	37.6	0.00			
Hatch City.	75	— 4	31.4	0.39	6.5	Bowie.	86	13	51.8	0.00	Coyote ^d .	73	— 2	37.4	T.	T.	
Howard.	70°	0°	31.4°	0.70	7.0	Brenham.	85	28	58.6	0.90	Deseret.	73					
Howell.	72	— 6	28.6	0.26	2.8	Brighton.	83	35	64.0	0.80	Emery.	65	0	38.4	0.00		
Ipswich.	70	— 8	37.2	0.02	0.1	Brownwood.	89	21	54.9	0.00	Escalante.	65	12	39.8	0.00		
Kidder.	69	— 6	26.2	0.02	T.	Burnet.	90	23	56.4	0.13	Farmington.	68	13	39.1	1.86		
Kimball.	75	— 1	31.4	0.77	7.7	Camp Eagle Pass.	89	24	58.0	0.00	Fillmore ^a .	71	9	42.0		7.6	
Leola.	70	— 6	29.0	0.05	1.0	Childress.	88	12	50.2	0.00	Fort Duchesne.	64°	— 1	31.8°	0.00		
Marion.	70°	30.5°	0.24	3.0	Coleman.	87	21	56.7	0.00	Frisco.	64	15	43.4	0.02			
Mellette.	73	— 6	30.4	0.14	1.4	College Station.	85	27	59.6	0.44	Garrison.	70	12	40.8	T.	T.	
Menno.	68	1	32.8	0.39	5.3	Colorado.	90	13	54.3	0.00	Giles.	65	6	37.0	0.00		
Oelrichs.	74	— 8	31.2	0.20	2.0	Columbia.	83	33	64.9	0.16	Government Creek.	66	9	39.8	0.54	2.5	
Pedro.	72	1	31.8	0.18	2.0	Columbus.				Green River.	78	5	39.8	0.00			
Pine Ridge.	75	— 5	33.3	0.07	1.5	Corsicana.	85	22	55.4	0.23	Grover.	71	6	40.4			
Plankinton.	70	— 2	31.4	0.29	7.5	Cotulla.	90	31	62.8	0.00	Heber.	67	6	36.8	1.90	1.0	
Ramsey.	70	— 5	29.5	0.30	3.5	Cuero.	86	32	58.0	1.38	Henefer.	72	— 19	35.2	3.27	20.0	
Redfield.	76	— 10	27.9	0.16	2.5	Dallas.	88	18	52.4	0.00	Hite.	73	20	48.0	0.00		
Rosebud.					Dialville.	82°	22	56.2°	T.	Huntsville.					12.0		
Silver City.					Dublin.	82	25	51.4	0.00	Ibapah.	71	— 6	36.3	0.37	2.0		
Sioux Falls ^f .	68	— 1	28.4	0.13	1.5	Duval.	83	26	58.7	0.06	Levan.	65	8	38.4	0.24	2.3	
Sisseton Agency.	68	— 2	28.6	T.	Estelle.	87	19	53.8	0.00	Logan.	67	5	35.3	2.29			
Spearfish.	73	— 2	33.9	0.65	9.0	Fort Brown.	89	40	67.8	0.00	Lund.	65	14	38.8	0.00		
Stephan.	71	— 3	29.6	0.50	5.7	Fort Clark.	85	29	55.4	0.00	Manti.	70	7	38.4	0.20	2.0	
Tyndall.	69	1	34.0	0.52	3.4	Fort Davis.	82	15	52.2	0.00	Marysville.	70	5	40.6	T.	T.	
Watertown.	69	— 5	28.6	0.14	1.4	Fort McIntosh.	96	31	64.4	0.00	Meadowville.	62	2	32.0	3.20	17.0	
Wentworth.	69	— 8	28.8	0.33	2.2	Fort Ringgold.	95	34	66.8	0.10	Millville.						
Wolsey.					Fort Stockton.					Moab.	75	10	42.4	0.00			
<i>Tennessee.</i>					Fredericksburg.	83	26	56.0	0.00	Monticello.	70	7	44.2	0.00			
Andersonville.	75	9	42.8	4.95	0.5	Gainesville.	81	16	50.2	0.00	Morgan.	70	— 14	35.3	3.01	14.0	
Ashwood.	75	15	46.5	4.63		Gatesville.				Mount Nebo.	70	7	39.8	T.			
Benton.	77	11	45.3			Georgetown.	97	25	58.5	0.00	Mount Pleasant.	69	8	40.6	0.20	2.0	
Bluff City.					Grapevine.	87°	19d	53.8d	0.00	Ogden.	68	12	38.8	1.74			
Boilvor.	76	15	46.8	3.27		Greenville.	85	20	52.6	0.00	Park City.	64	0	37.8	2.47	21.7	
Bristol.	72	11	40.7	3.65		Hale Center.	83	17	51.0	0.00	Parowan.	68	10	40.6	T.		
Byrdstown.	75	11	43.1	4.51	1.6	Hallettsville.	84	32	60.6	0.55	Pinto.	67	8	37.8	0.00		
Carthage.	79	16	45.9	4.54	T.	Haskell.	90	9	53.1	0.04	Plateau.	76	— 3	39.7	0.02	0.3	
Charleston.					Hearne.	90	35	63.0	0.00	Provo.	73	3	39.8	1.14	3.4		
Clarksville.	74	16	45.2	3.34	1.1	Hempstead.				Ranch.	70	12	40.2	T.			
Clinton.					Henrietta.	91	13	52.6	0.00	St. George.	76	18	44.8	0.00			
Covington.	77	17	47.4	3.10	1.0	Hewitt.				Salt Air.	66	19	39.4	1.71	6.5		
Decatur.	76	12	45.0	4.12		Hillsboro.	87	21	54.0	0.00	Scipio.	71	— 1	38.9	0.48	3.0	
Dickson.	75	14	44.9	4.18	0.1	Hondo.	86	32	59.2	T.	Snowville.	64	2	33.4	1.87		
Dover.	80	14	46.4	5.52	2.0	Houston.	86	31	59.2	1.12	Terrace.	80	19	43.6	1.30	13.0	
Elizabethton.	76	11	41.8	3.37	5.0	Huntsville.				Thistle.	68	16	39.4	1.64			
Erasmus.	74	5	41.3	4.61	0.3	Ira.	91	17	55.0	0.00	Tooele.	64	16	35.6	0.18	T.	
Florence.	75	16	45.8	4.68	T.	Jasper.	87°	23	57.9°	0.50	Vernal.	64	5	35.6	0.90	5.0	
Franklin.	72	16	44.8	4.81	T.	Jefferson.	83	16	53.0	0.05	Wellington.	78	1	37.2	0.00		
Grace ^{*1} .	82	16	47.0	8.20		Junction.				<i>Vermont.</i>							
Greenville.	76	13	43.9	3.48	2.9	Kaufman.	83	21	53.4	T.	Burlington.	61	14	35.8	1.21	1.5	
Halls Hill.					Kent.	85	17	55.8	0.00	Cavendish.	70	— 1	33.0	1.02	1.9		
Harriman.	75	14	43.8	3.80	T.	Kerrville.	90	30	64.1	0.00	Chelsea.	61	— 1	29.0	1.02	5.0	
Hohenwald.	76	9	43.5	3.27		Kopperl.				Cornwall.	66	7	35.0	2.10			
Iron City.	74	11	45.8	3.97		Lampass.	92	22	54.4	0.00	Derby.	61	3	30.4	1.58		
Isabella.	72	15	44.2	3.23	T.	Liberty.				Enosburg Falls.	64	— 4	29.8	1.63	9.6		
Jackson.	78	11	46.2	4.63		Llano.	91	30	57.2	0.00	Jacksonville.	59	6	24.8	1.91	5.3	
Johnsouville.	76	12	45.6	3.12	T.	Longview.	93	21	52.8	0.65	Manchester.	60	— 1	32.2	2.14	2.0	
Jonesboro.	75	13	42.4	4.64	3.6	Luling.	85	26	57.2	0.10	Morrisville.	62	— 2	30.4	2.00	9.7	
Kenton.	79	15	45.8	3.29	1.0	Marlin.	82	21	54.8	0.95	Norwich.	66	— 1	30.6	1.02	2.0	
Kingston.					Menardville.				St. Johnsbury.	66	2	30.9	1.00	3.0			
Lafayette.	74	11	43.6	4.31	T.	Mount Blanco.	84	11	49.0	0.00	Wells.	60	6	31.4	1.85	1.0	
Leadvale.					Nacogdoches.	85	17	54.2	0.37	Woodstock.	77	0	33.5	1.38			
Lebanon.	78	12	46.6	6.48		New Braunfels.	85	31	59.6	0.00	<i>Virginia.</i>						
Lewisburg.	76	14	46.2	4.88	0.5	Orange.				Ashland.	75	16	43.0	1.87	0.5		
Liberty.	85	12	45.2	4.81	T.	Panter.				Barbourville.	75	16	44.6	0.76	0.7		
Lynnaville.	76	16	47.0	4.57	T.	Pearsall.	80	33	62.4	0.73	Bedford.	80	19	45.8			
McKenzie.	75	11	46.1			Port Lavaca.	83	35	62.4	0.00	Bigstone Gap.	77	8	37.6	3.64	5.4	
McMinnville.	76	11	45.0	3.66	1.7	Rhineland.	90	12	50.9	0.00	Blacksburg.	79	8	37.6	1.94	3.0	

TABLE II.—*Climatological record of voluntary and other cooperating observers*—Continued.

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.			Stations.	Temperature. (Fahrenheit.)			Precipita- tion.			Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.			Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.			Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.	
<i>Virginia—Cont'd.</i>							<i>West Virginia—Cont'd.</i>							<i>Wisconsin—Cont'd.</i>						
McDowell	78	5	39.0	0.13	0.5	<i>Ins.</i>	Elkhorn	75	9	41.3	3.47	10.1		Wausau	67	— 1	28.2	0.88		
Mendota				3.13	3.5		Fairmont		10	37.3	2.70	1.0		Whitehall	70	— 4	31.2	0.17	1.8	
Newport News	78	22	44.8	2.60	T.		Glenville	76			3.01	4.0		<i>Wyoming.</i>						
Petersburg	77	18	45.6	1.33	0.2		Grafton	74	8	38.3	3.62	10.5		Afton	66	— 16	31.6	1.51	13.0	
Quantico	76	13	44.2				Green Sulphur Springs	78	4	37.9	1.60	6.0		Alcova	64	10	35.5	T.		
Radford				0.98	4.0		Harpers Ferry				0.79	0.2		Basin	69	— 12	30.4	T.		
Riverton				0.14			Hinton	75	9	40.2	2.24	5.5		Battle	54	— 10	25.5	6.20	62.0	
Roanoke	62	11	37.0	1.88	3.5		Huntington	72	11	38.4	2.38	4.0		Bedford	62	— 12	30.0	1.26	10.3	
Rockymount	67	11	38.8	1.68	3.0		Josiah	71	12	39.6	2.53	4.5		Border	65	— 29	24.4	1.95		
Saxe	80	8	44.0	1.59	T.		Leonard	72	4	35.1	2.85	10.0		Buffalo	71	— 26	30.2	0.35	3.2	
Shenandoah				0.81	0.1		Lewisburg	71	6	36.8	1.86	4.0		Chugwater	71	— 10	36.2	0.50	5.0	
Speers Ferry				3.78	6.0		Logan	76	11	43.4	3.15	11.0		Daniel	60	— 29	23.5	1.30	13.0	
Spottsville	80	16	45.2	2.94	0.5		Lost Creek	74	8	37.4	2.91	1.5		Evanston	62	— 10	31.4	1.62	8.5	
Stanardsville	75	16	42.2	0.70	1.0		Mannington	72	1	36.4	2.63	1.3		Fontenelle	62	— 22	28.8	0.95	9.5	
Staunton	74	10	41.5	0.98	1.0		Marietta	73	9	33.4	0.93	3.0		Fort Laramie	77	— 8	35.6	0.57	2.0	
Stephens City	78	13	40.5	0.81	0.8		Martinsburg	73	15	38.2	0.85	0.5		Fort Washakie	63	— 5	35.0	0.00		
Warsaw	74 ^a	16 ^a	40.6 ^a	1.71	1.5		Morgantown	73	10	38.6	2.26	3.0		Fort Yellowstone	60	— 10	31.8	1.40	11.0	
Wilkerson	73	15	44.0	1.23	1.0		Moscow	70	12	37.2	2.38	T.		Fourbear	65	— 12	31.8	0.20	4.0	
Williamsburg	74	16	44.8	2.15			Moundsville	71	12	38.8	1.95	2.6		Griggs	71	— 12	33.5	0.58	5.8	
Woodstock	76	14	41.4	0.70	0.6		New Martinsville	73	12	40.6	2.30	2.5		Hyattville	68	— 14	33.8			
Wytheville	77	8	39.8	2.26	12.5		Nuttallburg	76	10	43.6	3.10	9.0		Laramie	62	— 6	34.8	0.30	6.0	
<i>Washington.</i>							Philippi	75	— 1	37.2	3.41	5.1		Leo	60	— 7	33.2	0.21	3.0	
Aberdeen	60	31	44.6	19.75	T.		Pickens	75	3	37.1	4.98	18.5		Lusk	72	— 15	32.1	0.26		
Anacortes				4.96			Point Pleasant	75	14	41.2	2.64	4.0		Marquette	70	— 16	35.0	0.92	6.0	
Ashford				15.03	28.5		Powellton	74	0	36.8	1.67	4.6		Moore	69	— 9	38.2	0.72	7.0	
Blaine	62	24	43.6	8.31	0.7		Princeton	70	8	37.8	4.30	13.0		Moercroft	70	— 15	31.2	0.30	3.0	
Bremerton	62	30	44.2	9.98			Romney	76	11	38.8	0.92	1.0		Pinebluff	78	— 15	37.4	T.	T.	
Brinnon	64	28	45.4	16.68	13.0		Rowlesburg							Phillips	75	— 11	36.7	0.50	5.0	
Cedonia	63	3	33.0	2.82	16.5		Ryanes	78	6	38.8	2.35	4.5		Rawlins	66	6	35.6	0.49	3.3	
Centralia	66	25	44.3	9.52	T.		Southside	73	14	42.6	2.65	4.0		Redbank	67	— 12	35.0	1.40		
Cheney				3.15	11.0		Spencer	79	9	40.6	2.72	5.5		South Pass	62	— 18	26.2	3.10	31.0	
Clearbrook	66	19	41.0	9.26	2.0		Terra Alta	70	5	34.2	3.90	6.0		Thayne	65	— 16	29.5	1.70	11.6	
Clearwater	58	28	43.2	24.84	T.		Travellers Repose	71	— 4	32.6	2.00	5.0		Thermopolis	50	— 16	26.0	0.15	1.5	
Cle Elum	58	10	33.2	6.35	36.0		Uppertrett	75	6	39.6	0.67	4.0		<i>Porto Rico.</i>						
Colfax	73	9	40.2	3.94	T.		Valley Fork	75	0	39.6	3.44	4.0		Adjuntas	97	54	73.3	14.55		
Colville	70	— 5	33.0	1.82	10.9		Webster Springs	76	3	37.7				Aguirre	93	67	79.5	2.78		
Concoony	59	— 5	31.6	3.50	22.0		Wellsbury	68	11	36.2	3.36	4.0		Arecibo	89	64	77.0	5.05		
Connell				2.25	2.0		Weston				3.03	4.5		Barros	87	57	71.6	11.81		
Coupeville	65	28	45.2	4.36	7.0		Wheeling ^a				2.08	1.8		Bayamon	95	60	77.4	2.04		
Crescent	64	7	33.4	4.16	14.5		Wheeling ^b	69	20	40.6	2.05	2.5		Caguas	91	61	76.2	8.51		
Danville	61	0	38.8	1.99	5.7		Wisconsin.							Canovanas	87	70	77.8	6.85		
Dayton	79	19	42.4	4.01	5.0		Amherst	70	— 4	29.8	1.15	8.5		Cavey	85	60	72.6	6.42		
East Sound	63 ^a	26 ^a	42.8 ^a	5.64	2.0		Ashland				0.80	5.0		Cidra	90	54	72.9	3.60		
Ellensburg	58	3	33.0	3.59	25.5		Antigo	67	— 6	28.2	0.80	8.0		Carozal	91	55	74.2	11.34		
Ephrata	62	15	35.1	1.41	12.0		Appleton	68	6	32.4	1.24	3.6		Fajardo	90	69	79.0	5.87		
Grandmound	66	27	43.8	10.30	1.0		Appleton Marsh	72	0	29.5	0.48	2.5		Guanica	91	60	77.4	5.09		
Granite Falls				12.73	4.5		Barron ^a	70	— 8	25.0	0.50	5.0		Hacienda Josefa						
Hooper	77 ^b	21 ^w	45.0 ^b	2.19	0.5		Beloit	67	7	33.9	1.14	0.7		Hacienda Perla	85	70	75.8	10.14		
Horseheaven				1.88	11.6		Brodhead	73	3	34.0	1.18	1.5		Humacao	81	68	79.8	4.78		
LaCentter	65	23	43.2	11.32	T.		Burnett	69	2	31.9	1.20	3.4		Isabela	87	66	76.7	4.66		
Lakeside	56	15	35.8	3.21	19.5		Butternut	69	— 4	27.8	1.26	11.9		La Carmelita	86	63	74.0	17.02		
Lind	70	16	39.2	2.95	7.5		Chilton	70	5	30.3	1.46	5.8		La Isolina	89	62	74.7	12.34		
Loomis	64	3	33.2	3.10	14.0		Citypoint	74	— 4	30.2	0.69	6.5		Lares	88	59	74.0	9.75		
Mayfield	73			14.59	4.0		Dodgeville	71	3	34.4	1.60	4.0		Las Marias	93	66	78.6	12.45		
Mottinger Ranch	67	27	43.0	2.08	0.8		Downing	74	— 12	27.8	0.52	4.7		Manati	94	65	77.4	5.02		
Mount Pleasant	65	30	45.5	11.37			Durand	71	0	34.2				Maunabo	91	65	78.2	8.77		
Moxee	64	12	36.6	2.65	17.1		Easton	68	— 4	29.8	0.60	1.8		Mayaguez	90	63	77.1	6.48		
Northport	56	— 4	33.2	1.54	6.5		Eau Claire	67	— 5	29.3	0.65	6.0		Morovis	91	63	76.7	13.23		
Odessa	73	18	37.2	2.59	3.5		Florence	80	— 6	28.6	1.53	6.0		Rio Piedras						
Olga	62	27	43.9	5.75	T.		Fond du Lac	67	5	32.6	1.34	3.0		San German	96	61	78.9	15.52		
Olympia	69	29	45.5	11.72	T.		Grand Rapids	69	— 6	29.4	1.08	2.5		San Lorenzo	91	59	75.0	5.87		
Pinehill	59	21	40.4	6.05	11.0		Grantsburg	68	— 14	26.0	0.60	6.0		San Salvador	87	61	73.2	10.60		
Pomeroy	73	23	42.1	4.19	6.5		Hancock	67	— 2	29.2	0.68	5.0		Santa Isabel	90	63	77.7	7.24		
Port Townsend	63	32	45.0	3.73	T.		Harvey	68	7	32.2	1.02	1.8		Vieques	91	66	76.5	3.18		
Pullman	67 ^a	17 ^a	38.6 ^a	3.08	8.0		Hayward	70	— 11	26.2	1.48	10.0		Yauco	87	64	76.8	6.50		
Rattlesnake	64	12	34.4	2.18	6.6		Hillsboro	69	— 1	30.9	0.55	0.5		<i>Mexico.</i>						
Republic	64	— 7	31.0	2.51	14.0		Koepenick	75	3	29.7	1.40	12.0		Ciudad P. Diaz	80	24	55.4	T.		
Ritzville				2.82	4.0		Lancaster	70	2	31.7	0.60	1.9		Coatzaocalcos	93	50	72.8	10.29		
Rosalia	71	15	38.3	3.34	3.7		Madison	64	9	32.7	1.07	1.0		Durango	73	52	62.9	T.		
Sedro-Woolley	67	26	44.8	7.25	T.		Manitowoc	68	— 12	28.1	0.20	2.0		Leon of Aldamias	79	38	58.8	T.		
Silvana	63 ^a	24 ^a	45.4 ^a	5.84	1.0		Oconto	70	2	31.3	0.76	6.0		<i>New Brunswick.</i>						
Snohomish	63	22	45.4	7.41	T.		Osceola	70	— 15	27.4	0.20	2.0		St. John.	58	13	35.5	6.61	9.0	
Southbend	65	33	46.6	14.03			Oshkosh	75	4	31.8	1.37	3.3		Isthmus of Panama.						
South Ellensburg	64	4	34.8	3.20	22.0		Pine River	72 ^c	0	32.0	1.00	6.5		Alhajuela	91	73	80.8	16.30		
Sprague				3.95	5.0		Portage	71	7	33.7	1.08	2.0		Bohio						
Sunnyside	65	24	39.0																	

TABLE II.—*Climatological record of voluntary and other cooperating observers. Late reports for October—Continued.*

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.	
<i>California—Cont'd.</i>	°	°	°	Ins.	Ins.	<i>Massachusetts.</i>	°	°	°	Ins.	Ins.	
Cisco* ¹	72	26	51.1	1.00		East Templeton* ¹	72	26	48.4	3.02	T.	
Corning* ¹	95	48	69.6	0.15		<i>Michigan.</i>						
Delano* ¹	89	56	68.6	0.00		Berrien Springs.....	84 ^e	30 ^e	53.0 ^e	2.50	T.	
Delta* ¹	90	46	62.7	5.17		Deer Park.....	71	30	46.6	2.46	T.	
Dunnigan* ¹	90	49	69.4	0.36		<i>New Jersey.</i>						
Mammoth.....	97	49	74.4	0.00		Clayton.....	79	30	56.4	.....	
Modesto* ¹	101	49	65.4	0.00		Englewood.....	76	32	56.6	11.75		
Mohave.....	90	45	61.7	0.00		Luna.....	77	10	43.8	0.00		
Monterey* ¹	80	48	58.4	0.00		<i>New York.</i>						
Ogilby* ¹	102	60	75.3	0.00		Boyds Corners.....				8.59		
Salton.....	99	46	73.4	0.00		Southeast Reservoir.....				6.90		
San Mateo* ¹	88	50	63.0	0.29		<i>North Carolina.</i>						
San Miguel* ¹	93	38	64.2	0.00		Highlands.....	73	15	47.8	4.29		
San Miguel Island.....	85	52	61.3	0.30		Springhope.....	85	30	59.8	4.47		
Sisson.....	80	28	52.6	1.75		Minot.....	76	.....	.....	0.90	
Tehama* ¹	90	49	66.4	0.39		<i>Oklahoma.</i>						
Truckee* ¹	84	30	52.6	1.02		Enid.....	90	33	60.8	4.83		
Volcano Springs.....	102	42	75.2	0.00		<i>Oregon.</i>						
<i>Georgia.</i>						Burns (near).....				0.29		
Eastman.....	91	34	65.5	2.63		<i>South Carolina.</i>						
Woodbury.....	86	28	60.2	1.51		Pinopolis* ¹	80	37	61.9	3.73		
<i>Idaho.</i>						<i>Texas.</i>						
Roosevelt.....	78 ^k	16 ^k	44.8 ^k	1.14	5.0	Fredericksburg.....	88	34	63.7	2.30		
<i>Indiana.</i>						La Para.....				2.28		
Mount Vernon.....	83	28	58.1	1.05		Marlin.....	93	40	66.5	2.51		
Winamac.....	86 ^e	20 ^e	55.4 ^e	4.02		<i>Utah.</i>						
<i>Indian Territory.</i>						Bluecreek.....	78	.....	.....	1.55	
Durant.....	88 ^e	35	61.4	4.92		<i>Porto Rico.</i>						
<i>Kansas.</i>						Cayey.....	92	59	75.9	7.40		
Eureka.....						Cidra.....	90	50	71.2	7.15		
<i>Maryland.</i>						San German.....	96	67	81.0	12.03		
Darlington.....	78	29	55.2	4.20	T.							
McDonogh.....	80	32	56.6	2.36								

EXPLANATION OF SIGNS.

*Extremes of temperature from observed readings of dry thermometer.

A numeral following the name of a station indicates the hours of observation from which the mean temperature was obtained, thus:

¹ Mean of 7 a. m. + 2 p. m. + 9 p. m. + 4.

² Mean of 8 a. m. + 8 p. m. + 2.

³ Mean of 7 a. m. + 7 p. m. + 2.

⁴ Mean of 6 a. m. + 6 p. m. + 2.

⁵ Mean of 7 a. m. + 2 p. m. + 2.

⁶ Mean of readings at various hours reduced to true daily mean by special tables.

The absence of a numeral indicates that the mean temperature has been obtained from daily readings of the maximum and minimum thermometers.

An italic letter following the name of station, as "Livingston *a*," "Livingston *b*," indicates that two or more observers, as the case may be, are reporting from the same station. A small roman letter following the name of a station, or in figure columns, indicates the number of days missing from the record; for instance "*n*" denotes 14 days missing.

No note is made of breaks in the continuity of temperature records when the same do not exceed two days. All known breaks, of whatever duration, in the precipitation record receive appropriate notice.

TABLE III.—Resultant winds from observations at 8 a. m. and 8 p. m., daily, during the month of November, 1903.

Stations.	Component direction from—				Resultant.		Stations.	Component direction from—				Resultant.		
	N.	S.	E.	W.	Direction from—	Duration,		N.	S.	E.	W.	Direction from—	Duration,	
<i>New England.</i>														
Eastport, Me.	Hours.	Hours.	Hours.	Hours.	°	Hours.	North Dakota—Continued.	Hours.	Hours.	Hours.	Hours.	°	Hours.	
Portland, Me.	24	10	8	30	n. 58 w.	26	Williston, N. Dak.	18	20	12	23	s. 80 w.	11	
Concord, N. H. †	22	17	3	32	n. 80 w.	29	Minneapolis, Minn.*	9	12	6	12	s. 63 w.	7	
Northfield, Vt.	10	7	4	16	n. 76 w.	12	St. Paul, Minn.	20	19	15	24	n. 84 w.	9	
Boston, Mass.	22	31	2	12	s. 48 w.	14	La Crosse, Wis. †	14	10	3	7	n. 45 w.	6	
Nantucket, Mass.	19	6	4	40	n. 70 w.	38	Davenport, Iowa	18	16	15	24	n. 77 w.	9	
Block Island, R. I.	26	11	4	31	n. 61 w.	31	Des Moines, Iowa	20	20	15	20	w.	5	
Narragansett, R. I. *	29	8	6	32	n. 51 w.	33	Dubuque, Iowa	18	22	14	24	s. 68 w.	11	
New Haven, Conn.	10	8	4	14	n. 79 w.	10	Keokuk, Iowa	18	20	17	21	s. 63 w.	4	
	36	6	2	24	n. 36 w.	37	Cairo, Ill.	25	21	16	13	n. 37 e.	5	
<i>Middle Atlantic States.</i>							Springfield, Ill.	18	20	14	21	s. 74 w.	7	
Albany, N. Y.	26	18	6	21	n. 62 w.	17	Hannibal, Mo. †	12	6	5	11	n. 45 w.	8	
Binghamton, N. Y. †	10	1	10	14	n. 24 w.	10	St. Louis, Mo.	15	20	23	18	s. 45 w.	7	
New York, N. Y.	21	10	6	38	n. 71 w.	34								
Harrisburg, Pa.	25	11	8	31	n. 59 w.	27	<i>Missouri Valley.</i>							
Philadelphia, Pa.	33	11	4	31	n. 51 w.	35	Columbia, Mo. *	8	10	11	8	s. 56 e.	4	
Scranton, Pa.	25	13	11	25	n. 49 w.	18	Kansas City, Mo.	18	22	20	15	s. 51 e.	6	
Atlantic City, N. J.	30	8	3	35	n. 56 w.	39	Springfield, Mo.	21	23	18	16	s. 45 w.	3	
Cape May, N. J.	31	10	5	26	n. 45 w.	30	Topeka, Kans.*	12	12	7	4	e.	3	
Baltimore, Md.	29	10	4	32	n. 56 w.	34	Lincoln, Nebr.	25	19	16	12	n. 34 e.	7	
Washington, D. C.	26	14	8	27	n. 58 w.	22	Omaha, Nebr.	28	17	11	13	n. 10 w.	11	
Cape Henry, Va. †	14	8	3	12	n. 56 w.	11	Valentine, Nebr.	22	15	12	22	s. 55 w.	12	
Lynchburg, Va.	21	16	13	27	n. 70 w.	15	Sioux City, Iowa †	13	9	8	8	n. 4	4	
Norfolk, Va.	29	18	8	36	w.	14	Pierre, S. Dak.	22	11	24	15	u. 39 e.	14	
Richmond, Va.	30	16	7	19	n. 41 w.	18	Huron, S. Dak.	20	20	13	16	w.	3	
Wytheville, Va.	19	9	8	37	n. 71 w.	31	Yankton, S. Dak. †	10	6	7	12	n. 51 w.	6	
<i>South Atlantic States.</i>														
Asheville, N. C.	25	19	14	24	n. 59 w.	12	<i>Northern Slope.</i>							
Charlotte, N. C.	22	20	23	12	n. 80 e.	11	Havre, Mont.	13	12	14	34	n. 87 w.	20	
Hatteras, N. C.	34	9	13	17	n. 9 w.	25	Miles City, Mont.	16	26	9	20	s. 48 w.	15	
Kittyhawk, N. C. *							Helena, Mont.	11	21	4	39	s. 74 w.	36	
Raleigh, N. C.	29	9	11	19	n. 22 w.	22	Kalispell, Mont.	12	14	7	40	s. 87 w.	33	
Wilmington, N. C.	32	11	12	17	n. 13 w.	22	Rapid City, S. Dak.	24	10	9	31	n. 58 w.	26	
Charleston, S. C.	30	10	14	16	n. 6 w.	18	Cheyenne, Wyo.	22	13	9	33	n. 69 w.	26	
Columbia, S. C.	24	13	22	16	n. 29 e.	12	Lander, Wyo.	13	27	16	17	s. 4 w.	14	
Augusta, Ga.	24	9	25	19	n. 22 e.	16	North Platte, Nebr.	18	19	11	24	s. 86 w.	13	
Savannah, Ga.	30	11	10	19	n. 25 w.	21								
Jacksonville, Fla.	31	11	14	19	n. 14 w.	21	<i>Middle Slope.</i>							
<i>Florida Peninsula.</i>							Denver, Colo.	11	30	11	20	s. 25 w.	21	
Jupiter, Fla.	25	13	18	18	n.	12	Pueblo, Colo.	18	23	18	18	e.	5	
Key West, Fla.	42	1	31	4	u. 33 e.	49	Concordia, Kans.	20	22	18	12	s. 72 e.	6	
Sand Key, Fla. †	18	1	17	3	n. 39 e.	22	Dodge, Kans.	22	18	18	17	n. 14 e.	4	
Tampa, Fla.	35	6	15	15	n.	29	Wichita, Kans.	28	19	8	8	n. 48 e.	14	
							Oklahoma, Okla.	29	23	9	9	n. 30 e.	6	
<i>Eastern Gulf States.</i>														
Atlanta, Ga.	22	14	17	20	n. 21 w.	8	<i>Southern Slope.</i>							
Macon, Ga. †	16	4	7	10	n. 14 w.	12	Abilene, Tex.	19	31	16	6	s. 40 e.	16	
Pensacola, Fla. †	18	4	10	4	n. 23 e.	15	Amarillo, Tex.	16	24	12	22	s. 51 w.	13	
Birmingham, Ala.	14	7	12	5	n. 45 e.	10								
Mobile, Ala.	32	14	10	12	n. 6 w.	18	<i>Southern Plateau.</i>							
Montgomery, Ala.	29	13	21	12	n. 29 e.	18	El Paso, Tex.	21	5	12	37	n. 57 w.	30	
Meridian, Miss. †	15	6	9	8	n. 6 e.	9	Santa Fe, N. Mex.	22	18	30	8	n. 80 e.	22	
Vicksburg, Miss.	23	17	21	9	n. 63 e.	13	Flagstaff, Ariz.	30	10	10	24	s. 35 w.	24	
New Orleans, La.	31	16	20	9	n. 36 e.	19	Phoenix, Ariz.	12	2	30	23	n. 35 e.	12	
							Yuma, Ariz.	35	7	20	4	n. 30 e.	32	
<i>Western Gulf States.</i>							Independence, Cal.	19	17	12	28	n. 83 w.	16	
Shreveport, La.	19	18	20	16	n. 76 e.	4								
Fort Smith, Ark.	18	7	30	17	n. 50 e.	17	<i>Middle Plateau.</i>							
Little Rock, Ark.	23	12	19	22	n. 15 w.	11	Carson City, Nev.	12	24	10	27	s. 55 w.	21	
Corpus Christi, Tex.	24	18	28	2	n. 77 e.	27	Winnebucca, Nev.	22	16	21	15	n. 45 e.	8	
Fort Worth, Tex.	18	25	14	15	s. 8 w.	7	Modena, Utah.	8	14	14	37	s. 75 w.	24	
Galveston, Tex.	22	24	19	8	s. 80 e.	11	Salt Lake City, Utah.	13	24	24	16	s. 36 e.	14	
Palestine, Tex.	22	24	16	8	s. 76 e.	8	Grand Junction, Colo.	23	14	16	27	n. 51 w.	14	
San Antonio, Tex.	21	22	25	5	s. 87 e.	20								
Taylor, Tex. †	12	11	4	8	n. 76 w.	4	Baker City, Oreg.	5	36	26	11	s. 26 e.	34	
							Boise, Idaho.	16	21	21	16	s. 45 e.	7	
<i>Ohio Valley and Tennessee.</i>							Lewiston, Idaho. †	2	6	14	12	s. 27 e.	4	
Chattanooga, Tenn.	26	13	14	19	n. 21 w.	14	Pocatello, Idaho.	2	18	33	18	s. 43 e.	22	
Knoxville, Tenn.	32	10	17	19	n. 5 w.	22	Spokane, Wash.	17	21	23	8	s. 75 e.	16	
Memphis, Tenn.	25	19	17	13	n. 34 e.	7	Walla Walla, Wash.	7	37	12	12	s.	30	
Nashville, Tenn.	23	22	12	13	n. 45 w.	8								
Lexington, Ky. †	9	12	8	9	s. 18 w.	3	<i>North Pacific Coast Region.</i>							
Louisville, Ky.	22	18	12	19	n. 60 w.	8	North Head, Wash.	6	27	33	11	s. 46 e.	30	
Evansville, Ind. †	13	6	9	8	n. 8 e.	7	Port Crescent, Wash. *	2	15	11	11	s.	13	
Indianapolis, Ind.	20	17	16	21	n. 59 w.	6	Seattle, Wash.	9	29	31	6	s. 51 e.	32	
Cincinnati, Ohio.	16	17	18	22	n. 76 w.	4	Tacoma, Wash.	11	38	9	17	s. 17 w.	28	
Columbus, Ohio.	15	24	11	24	n. 55 w.	16	Tatoosh Island, Wash.	2	26	27	11	s. 34 e.	29	
Pittsburg, Pa.	26	13	7	29	n. 60 w.	13	Portland, Oreg.	12	25	21	20	s. 4 e.	13	
Parkersburg, W. Va.	18	24	9	21	n. 63 w.	27	Roseburg, Oreg.	12	24	18	21	s. 14 w.	12	
Elkins, W. Va.	23	12	4	29	n. 66 w.	32								
							<i>Middle Pacific Coast Region.</i>							
<i>Lower Lake Region.</i>							Eureka, Cal.	9	29	18	13	s. 14 e.	21	
Buffalo, N. Y.	10	19	10	32	s. 63 w.	24	Mount Tamalpais, Cal.	18	23	13	23	s. 63 w.	11	
Oswego, N. Y.	13	31	6	23	s. 43 w.	34	Red Bluff, Cal.	22	21	21	8	s. 86 e.	13	
Rochester, N. Y.	8	25	4	37	s. 62 w.	37	Sacramento, Cal.	15	28	24	10	s. 47 e.	19	
Syracuse, N. Y.	8	27	7	29	s. 49 w.	29	San Francisco, Cal.	16	17	10	26	s. 87 w.	16	
Erie, Pa.	17	24	5	26	s. 72 w.	22	Point Reyes Light, Cal. *	12	8	4	13	s. 66 w.	10	
Cleveland, Ohio.	9	34	12	20	s. 18 w.	25	Southwest Farallon, Cal. *	11	10	2	14	n. 85 w.	12	
Sandusky, Ohio. †	5	14	1	15	s. 57 w.	17								
Toledo, Ohio.	10	27	7	29	s. 52 w.	28	<i>South Pacific Coast Region.</i>							
Detroit, Mich.	12	22	3	34	s. 72 w.	33	Fresno, Cal.	22	20	17	18	n. 27 w.	2	
							Los Angeles, Cal.	18	6	14	32	n. 56 w.	22	
<i>Upper Lake Region.</i>							San Diego, Cal.	25	5	19	19	n.	29	
Alpena, Mich.	12	18	5	37	s. 79 w.	33	San Luis Obispo, Cal.	32	13	1	16	s. 38 w.	24	
Escanaba, Mich.	16	17	4	38	s. 88 w.	34								
Grand Rapids, Mich.	17	19	10	24	s. 82 w.	14	<i>West Indies.</i>							
Houghton, Mich. †	12	5	6	12	n. 41 w.	9	Basseterre, St. Kitts, W. I.							
Marquette, Mich.	15	16	6	34	s. 88 w.	28	Bridgeport, Barbados.							
Port Huron, Mich.	12	22	6	33	s. 70 w.	29	Cienfuegos, Cuba.							
Sault Ste. Marie, Mich.	18	17	18	22	s. 76 w.	4	Colon, Colombia, S. A. †							
Chicago, Ill.	17	19	8	28	s. 84 w.	20	Curacao, W. I.							
Milwaukee, Wis.	18	16	3											

TABLE IV.—*Thunderstorms and auroras, November, 1903.*

States.	No. of stations.																															Total.			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Alabama	52	T.	1	.....	1	.....	2	.....	.....	.....	3	.....	.....	.....	.....	2	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12	6	T.	
Arizona	56	T.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	0	0	A.				
Arkansas	57	T.	3	.....	1	5	.....	.....	.....	1	1	.....	.....	.....	.....	3	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	15	7	T.			
California	167	T.	1	.....	.....	.....	.....	1	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	10	.....	.....	.....	.....	.....	17	6	T.			
Colorado	81	T.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	T.				
Connecticut	21	T.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	T.				
Delaware	5	T.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	A.					
Dist. of Columbia	4	T.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	A.					
Florida	47	T.	2	1	4	9	1	8	1	1	.....	.....	.....	.....	.....	.....	1	.....	.....	1	3	.....	.....	1	.....	33	12	T.						
Georgia	55	T.	2	8	4	2	4	.....	1	.....	2	1	.....	.....	.....	2	11	1	.....	.....	.....	.....	.....	.....	38	11	T.							
Idaho	34	T.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	A.	0	0	0	0	0	0	0	0	0	T.			
Illinois	92	T.	2	.....	1	3	1	.....	.....	7	19	1	.....	1	13	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	48	9	T.						
Indiana	58	T.	2	.....	4	.....	.....	.....	1	24	1	1	2	26	.....	.....	1	.....	.....	.....	.....	.....	62	9	T.									
Indian Territory	11	T.	.....	1	1	.....	.....	.....	.....	1	4	.....	1	.....	.....	1	.....	1	2	.....	0	0	0	0	0	0	0	0	0	A.				
Iowa	149	T.	2	1	2	1	.....	1	.....	4	.....	1	.....	6	.....	.....	.....	.....	.....	.....	.....	1	.....	12	7	T.								
Kansas	77	T.	4	5	.....	1	.....	4	4	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....	20	7	T.								
Kentucky	41	T.	2	2	1	1	.....	10	.....	.....	12	1	1	1	1	1	1	3	1	1	1	1	1	1	29	7	T.							
Louisiana	46	T.	.....	1	6	.....	.....	1	.....	1	.....	1	.....	1	.....	1	1	1	1	1	1	1	1	1	3	3	A.							
Maine	19	T.	1	.....	.....	1	3	1	.....	1	.....	1	1	1	1	1	1	1	3	1	1	1	1	1	1	11	7	A.						
Maryland	48	T.	.....	.....	1	3	1	.....	1	.....	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	11	2	T.						
Massachusetts	48	T.	1	1	.....	1	.....	1	.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	A.			
Michigan	106	T.	1	1	1	1	1	1	18	1	10	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	37	6	T.				
Minnesota	67	T.	5	2	.....	2	9	1	.....	2	1	7	.....	.....	2	5	7	.....	1	1	1	1	1	1	1	18	6	A.						
Mississippi	44	T.	4	2	.....	9	1	.....	2	1	7	.....	.....	2	5	7	1	1	1	1	1	1	1	1	1	31	8	T.						
Missouri	95	T.	36	6	4	7	1	.....	3	12	19	.....	6	15	1	1	1	1	1	1	1	1	1	1	1	109	10	T.						
Montana	40	T.	4	1	12	1	.....	1	.....	1	.....	1	.....	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	A.		
Nebraska	142	T.	11	2	12	1	.....	1	.....	1	.....	1	.....	1	.....	1	3	1	1	1	1	1	1	1	1	1	1	1	26	4	T.			
Nevada	40	T.	.....	.....	1	.....	1	.....	1	.....	1	.....	1	.....	1	.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A.		
New Hampshire	19	T.	.....	.....	1	.....	4	.....	1	.....	1	.....	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A.		
New Jersey	51	T.	.....	1	.....	1	.....	1	.....	1	.....	1	8	.....	1	1	1	1	1	1	1	1	1	1	1	1	10	3	T.					
New Mexico	31	T.	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	0	0	0	0	A.			
New York	99	T.	.....	.....	.....	.....	.....	.....	.....	.....	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	2	T.							
North Carolina	56	T.	1	1	1	1	1	1	.....	1	1	1	1	1	1	1	1	16	1	1	1	1	1	1	1	1	1	1	1	1	1	24	8	A.
North Dakota	48	T.	1	.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	T.	
Ohio	128	T.	1	.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	104	5	T.	
Oklahoma	23	T.	1	2	2	.....	1	.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	A.	
Oregon	74	T.	1	.....	3	2	1	3	4	2	1	1	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	28	12	T.
Pennsylvania	91	T.	.....	1	.....	1	.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	32	3	T.
Rhode Island	7	T.	1	1	.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	A.	
South Carolina	46	T.	8	2	5	.....	1	.....	1	.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	A.
South Dakota	56	T.	2	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	T.	
Tennessee	56	T.	8	4	5	3	1	.....	10	2	1	1	1	14	15	2	2	9	2	1	1	1	1	1	1	1	1	1	1	1	23	11	A.	
Texas	95	T.	2	3	8	3	.....	2	.....	1	3	16	7	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	64	11	T.
Utah	47	T.	.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	T.
Vermont	16	T.	.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	A.
Virginia	50	T.	.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	A.
Washington	64	T.	.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	4	T.
West Virginia	43	T.	.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	T.
Wisconsin	60	T.	.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	2	T.
Wyoming	31	T.	.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	2	T.
Sums	2893	T.	83	38	47	58	33	11	5	3	12	33	150	7	8	13	36	206	110	3	3	5	3	3	10	1	1	1	1	1	2	1	889	...	T.

TABLE V.—Accumulated amounts of precipitation for each 5 minutes, for storms in which the rate of fall equaled or exceeded 0.25 in any 5 minutes, or 0.75 in 1 hour during November, 1903, at all stations furnished with self-registering gages.

TABLE V.—Accumulated amounts of precipitation for each 5 minutes, etc.—Continued.

Stations.	Date.	Total duration.		Total amount of precipitation.	Excessive rate.		Amount before excessive begun.	Depths of precipitation (in inches) during periods of time indicated.													
		From—	To—		Began—	Ended—		5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.
Savannah, Ga.	1-4	2	3	4	5	6	7														0.14
Scranton, Pa.	16-17	1:55 p. m.	4:25 p. m.	1.15				0.20	0.43	0.54	0.56	0.58									0.22
Seattle, Wash.	5			1.02																	0.03
Shreveport, La.	11			0.04																	0.26
Spokane, Wash.	5-6			0.88																	0.24
Springfield, Ill.	16			0.26																	0.18
Syracuse, N. Y.	16			0.26																	*
Tampa, Fla.	6	9:55 a. m.	12:45 p. m.	0.88	10:12 a. m.	10:34 a. m.	0.02	0.11	0.26	0.67	0.81	0.83									
Taylor, Tex.	4			0.32																	
Toledo, Ohio	16			0.37																	
Topeka, Kans.	1-2			0.64																	0.56
Valentine, Nebr.	13			0.02																	
Vicksburg, Miss.	11			0.12																	
Washington, D. C.	4-5			0.35																	
Wichita, Kans.	1-2			0.38																	
Wilmingtn, N. C.	4-5			0.40																	
Wytheville, Va.	17			0.79																	
Yankton, S. Dak.	24			0.52																	
Havana, Cuba	19-20	8:42 p. m.	10:20 a. m.	2.27	10:05 p. m.	10:35 p. m.	0.17	0.11	0.34	0.44	0.74	0.98	1.12	1.16							
San Juan, Porto Rico	29-30	9:50 p. m.	6:40 a. m.	1.31	1:25 a. m.	1:50 a. m.	0.42	0.09	0.29	0.44	0.55	0.64	0.68	0.71							

* Self register not working.

† No precipitation during the month.

TABLE VI.—Data furnished by the Canadian Meteorological Service, November, 1903.

Stations.	Pressure, in inches.			Temperature.			Precipitation.			Stations.	Pressure, in inches.			Temperature.			Precipitation.			
	Actual, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean.	Departure from normal.	Mean maximum.	Total.	Departure from normal.	Depth of snow.		Actual, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean.	Departure from normal.	Mean maximum.	Mean minimum.	Total.	Departure from normal.	Depth of snow.
St. Johns, N. F.	Ins.	Ins.	Ins.	0.04	41.2	+ 4.7	47.7	34.6	4.67	Parry Sound, Ont.	29.25	29.96	- .05	31.9	- 0.2	39.3	24.4	1.69	- 2.68	11.8
Sydney, C. B. I.	29.76	29.90	- .05	40.7	+ 3.6	48.1	33.4	6.13	+ 0.69	Port Arthur, Ont.	29.30	30.03	+ .03	26.0	+ 2.0	33.7	18.4	0.35	- 0.98	0.8
Halifax, N. S.	29.79	29.90	- .11	41.2	+ 3.9	47.7	34.7	9.59	+ 3.93	Winnipeg, Man.	28.20	30.10	+ .06	20.7	+ 3.4	39.9	11.5	1.57	+ 0.57	15.0
Grand Manan, N. B.	29.84	29.89	- .12	38.4	- 0.5	44.3	32.4	7.64	+ 2.02	Minnedosa, Man.	27.72	30.04	+ .04	22.2	+ 3.4	30.4	13.9	1.10	+ 0.21	11.0
Yarmouth, N. S.	29.85	29.92	- .10	40.0	+ 0.1	46.2	33.8	6.19	+ 1.63	Medicine Hat, Assin.	27.70	30.04	+ .04	25.1	- 2.3	34.5	15.7	0.45	- 0.47	4.5
Charlottetown, P. E. I.	29.84	29.88	- .08	37.3	+ 1.8	43.6	30.9	7.90	+ 3.93	Swift Current, Assin.	27.42	30.09	+ .07	23.6	+ 0.4	31.7	15.4	0.42	- 0.27	4.2
Chatham, N. B.	29.86	29.88	- .09	31.0	0.0	38.7	23.3	5.20	+ 1.45	Calgary, Alberta.	26.37	30.05	+ .07	21.1	- 4.7	30.8	11.4	0.60	- 0.28	6.0
Father Point, Que.	29.88	29.90	- .06	30.3	+ 1.4	36.3	24.3	2.09	- 1.02	Banff, Alberta.	25.32	30.08	+ .12	22.7	- 3.1	29.2	16.1	2.00	- 0.27	15.3
Quebec, Que.	29.63	29.97	- .05	29.4	+ 0.4	35.3	23.4	1.66	- 2.10	Edmonton, Alberta.	27.62	29.98	+ .01	22.9	0.0	31.7	14.2	0.86	+ 0.28	7.1
Montreal, Que.	29.79	30.01	- .02	32.2	+ 0.4	37.7	26.8	1.47	- 2.27	Prince Albert, Sask.	28.42	30.03	+ .00	19.9	+ 4.5	27.3	12.4	1.16	+ 0.33	11.6
Bissett, Ont.	29.40	30.03	+ .02	26.7	- 2.4	37.2	16.3	0.71	- 1.87	Battleford, Sask.	28.28	30.10	+ .08	19.8	+ 3.5	28.0	11.6	0.79	+ 0.21	7.5
Ottawa, Ont.	29.66	30.00	- .02	31.2	- 0.5	37.1	25.4	0.69	- 1.85	Kamloops, B. C.	29.82	29.92	- .07	44.5	+ 1.3	47.9	41.1	6.00	- 0.97	7.7
Kingston, Ont.	29.71	30.03	- .01	34.3	- 0.7	41.0	27.6	1.41	- 1.83	Victoria, B. C.	29.88	30.04	- .01	68.3	- 0.4	72.9	63.6	5.03	+ 0.65	
Toronto, Ont.	29.66	30.05	+ .01	35.0	- 0.6	42.2	27.8	1.24	- 1.90	Barkerville, B. C.										
White River, Ont.	28.64	30.00	+ .02	21.3	+ 0.8	31.0	11.9	3.56	+ 1.71	Hamilton, Bermuda.										
Port Stanley, Ont.	29.42	30.08	+ .03	34.3	- 2.5	41.8	26.9	1.63	- 1.74											
Saugeen, Ont.	29.30	30.03	+ .01	34.8	- 0.2	41.9	27.6	2.04	- 1.66											

TABLE VII.—Heights of rivers referred to zeros of gages, November, 1903.

Stations.	Distance to mouth of river.	Highest water.		Lowest water.		Mean stage.	Monthly range.	Stations.	Distance to mouth of river.	Highest water.		Lowest water.		Mean stage.	Monthly range.	
		Height.	Date.	Height.	Date.					Height.	Date.	Height.	Date.			
<i>Mississippi River.</i>								<i>Missouri River.</i>								
St. Paul, Minn.	Miles.	Feet.	Feet.	3.0	22, 23	5.1	4.1	Bismarck, N. Dak.	25	1.5	1-5, 16	0.0	21	0.9	1.5	
Red Wing, Minn.	1, 914	14	7.3	3.3	30	4.7	3.5	Pierre, S. Dak.	9	2.4	12, 13	2.0	18	2.2	0.4	
Reeds Landing, Minn.	1, 884	12	6.0	2.5	24-30	3.9	3.5	Sioux City, Iowa ²	2, 504	10	5.6	4	4.9	17	5.4	
La Crosse, Wis.	1, 819	12	8.1	3.8	29, 30	5.5	4.3	Omaha, Nebr.	2, 285	12	6.8	1	4.4	19	5.8	
Prairie du Chien, Wis ¹ .	1, 759	18	9.6	3.7	26	6.3	5.9	St. Joseph, Mo.	1, 309	14	3.5	6.7	0.1	25, 27, 28	1.8	
Dubuque, Iowa	1, 699	15	10.6	2.8	30	6.7	7.8	Kansas City, Mo.	1, 114	14	10.1	7	6.4	24, 26 ³	8.2	
LeClaire, Iowa	1, 609	10	7.1	0.7	30	4.2	6.4	Boonville, Mo.	784	19	9.2	6.8	5.7	29, 30 ³	3.5	
Davenport, Iowa	1, 593	15	9.6	2.5	30	6.1	4.3	Hermann, Mo.	669	18	9.8	7	5.6	28-30	4.2	
Muscatine, Iowa	1, 582	16	11.0	3.0	30	7.1	3.8	<i>Illinois River.</i>	135	14	10.2	1	8.9	21-24, 28-30	9.4	
Galland, Iowa	1, 472	8	5.7	1.9	30	3.6	3.8	Peoria, Ill.								
Keokuk, Iowa	1, 463	15	10.0	2.4	30	6.1	7.6	Youghiogheny River.								
Haunibul, Mo.	1, 402	13	11.7	4.4	30	7.9	7.3	Confluence, Pa.	59	10	2.0	17, 18	- 0.4	3-5	0.4	
Grafton, Ill.	1, 306	23	13.0	6.1	30	9.5	6.9	West Newton, Pa.	15	23	3.1	18	0.2	25-5	0.8	
St. Louis, Mo.	1, 264	30	15.4	6.4	30	11.9	9.0	<i>Alegheny River.</i>								
Chester, Ill.	1, 189	30	12.7	6.1	30	10.2	6.6	Warren, Pa.	177	14	6.2	18	0.6	13-16	2.0	
New Madrid, Mo.	1, 003	34	12.7	1.2	29, 30	13.2	5.4	Oil City, Pa.	123	13	7.5	18	1.1	5, 6, 11-16	2.4	
Memphis, Tenn.	843	33	9.3	1.2	30	7.6	3.6	Parker, Pa.	73	20	10.0	18	0.9	4, 5, 14-16	6.4	
Helena, Ark.	767	42	14.3	1	9.2	30	11.7	Freeport, Pa.	29	20	15.7	18	1.5	4	4.4	
Arkansas City, Ark.	635	42	16.2	1	10.1	28-30	13.3	<i>Clarion River.</i>	32	10	10.8	17	0.0	12	2.1	
Greenville, Miss.	595	42	12.9	1	8.1	30	10.8	4.8	Monongahela River.							
Vicksburg, Miss.	474	45	14.5	1	7.9	30	11.5	6.6	Weston, W. Va.	161	18	- 0.1	18	- 1.6	10, 11, 15, 16	

TABLE VII.—Heights of rivers referred to zeros of gages—Continued.

Stations.	Distance to mouth of river.	Danger line on gage.	Highest water.		Lowest water.		Mean stage.	Monthly range.	Stations.	Distance to mouth of river.	Danger line on gage.	Highest water.		Lowest water.		Mean stage.	Monthly range.
			Height.	Date.	Height.	Date.						Height.	Date.	Height.	Date.		
<i>Red Bank Creek.</i> Brookville, Pa.	Miles. 35	Feet. 8	Feet. 6.5	17	Feet. 0.2	9-16, 25-30	Feet. 0.7	6.3	<i>Housatonic River.</i> Gaylorsville, Conn.	Miles. ...	Feet. 6.0	18-20	Feet. — 4.2	13, 16	Feet. 4.7	1.8	
<i>Beaver River.</i> Ellwood Junction, Pa. ⁴	10	14	3.8	18	0.7	12-16	1.8	3.1	<i>Passaic River.</i> Chatham, N. J.	69	...	3.1	18	2.4	15-17	2.6	0.7
<i>Great Kanawha River.</i> Charleston, W. Va.	58	30	7.2	21-23	6.5	1-4	6.9	0.7	<i>Pompton River.</i> Pompton Plains, N. J. ⁶	6	...	4.9	18	4.2	15, 16	4.4	0.7
<i>Little Kanawha River.</i> Glenville, W. Va.	103	20	3.0	18	-2.2	4, 5, 10-12	-1.0	5.2	<i>Susquehanna River.</i> Binghamton, N. Y.	306	16	6.9	18	2.3	15, 16	3.1	4.6
<i>New River.</i> Radford, Va.	155	14	0.0	6-9, 18-20	-0.5	3	0.2	0.5	<i>Towanda, Pa.</i>	262	16	8.5	18	1.5	15, 16	2.7	7.0
<i>Hinton, W. Va.</i>	95	14	1.6	7	1.2	13, 17, 18, 28-30 ³	1.3	0.4	<i>Wilkesbarre, Pa.</i>	183	17	14.0	19	4.5	16	6.5	9.5
<i>Cheat River.</i> Rowlesburg, W. Va. ⁵	36	14	4.0	18	0.6	4.5	1.6	3.4	<i>Harrisburg, Pa.</i>	69	17	8.7	19	2.3	14-17	3.5	6.4
<i>Ohio River.</i> Pittsburg, Pa.	966	22	12.2	18	3.5	26	6.1	8.7	<i>Lockhaven, Pa.⁴.</i>	65	12	5.2	18	— 0.4	15, 16	0.8	5.6
Davis Island Dam, Pa.	960	25	11.8	18	2.9	1, 2, 4, 5, 7, 13-16 ³	4.8	8.9	<i>Williamsport, Pa.</i>	39	20	12.0	18	1.2	14, 15	3.0	10.8
Beaver Dam, Pa.	925	27	16.5	19	3.1	7	6.1	13.4	<i>Juniata River.</i> Huntingdon, Pa. ⁸	90	24	4.3	17	3.1	1-11	3.4	1.2
Wheeling, W. Va.	875	36	16.3	19	2.9	6, 8, 15, 16	5.7	13.4	<i>Shenandoah River.</i> Riverton, Va.	58	22	0.1	1, 2	— 0.5	13-30	— 0.3	0.6
Parkersburg, W. Va.	785	36	14.9	20	3.3	16	5.8	11.6	<i>Potomac River.</i> Cumberland, Md.	290	8	1.5	1, 2, 5, 6	1.2	12-15, 23-25 ²	1.3	0.3
Point Pleasant, W. Va.	703	39	13.7	21	1.8	9	4.3	11.9	<i>Harpers Ferry, W. Va.</i>	172	18	0.4	23	— 0.3	4-17	— 0.2	0.7
Huntington, W. Va.	660	50	16.8	22	4.3	7-9	7.0	12.5	<i>James River.</i> Lynchburg, Va.	260	18	0.9	6	0.3	21-30	0.4	0.6
Cattieburg, Ky.	651	50	16.2	22	2.1	7-9	5.1	14.1	<i>Richmond, Va.</i>	111	12	0.5	9	— 0.5	29	0.2	1.0
Portsmouth, Ohio.	612	50	16.2	22	3.3	7-10, 14	6.2	12.9	<i>Dan River.</i> Danville, Va.	55	8	1.2	6	— 0.1	1-4, 16, 17	0.1	1.3
Cincinnati, Ohio.	499	50	16.5	24	4.5	11-16	7.3	12.0	<i>Roanoke River.</i> Clarksville, Va.	196	12	4.5	18	2.7	1-3	3.3	1.8
Madison, Ind.	413	46	13.6	25	4.6	12-15	6.6	9.0	<i>Cape Fear River.</i> Weldon, N. C.	129	30	11.4	20	8.9	1, 3	9.4	2.5
Louisville, Ky.	367	23	7.5	26	3.0	5, 6, 11-13	4.0	4.5	<i>Edisto River.</i> Fayetteville, N. C.	112	38	5.3	8	2.1	18	2.9	3.2
Evansville, Ind.	184	35	10.0	28	2.3	18	4.1	7.7	<i>Pedee River.</i> Cheraw, S. C.	75	6	3.6	21-23	2.9	3, 4, 14	3.1	0.7
Paducah, Ky.	47	40	6.0	30	1.9	19, 20	2.7	4.1	<i>Black River.</i> Kingtree, S. C.	149	27	5.0	6	1.7	17	2.4	3.3
Cairo, Ill.	1,073	45	15.4	2	10.9	29	13.2	4.5	<i>Lynch Creek.</i> Effingham, S. C.	35	12	4.6	20, 21	3.0	4-7, 13	3.7	1.6
<i>Muskingum River.</i> Zanesville, Ohio.	70	20	8.9	19	7.3	1-6, 10-16	7.5	1.6	<i>Santee River.</i> St. Stephens, S. C.	97	12	6.3	10	1.5	1, 2	3.0	4.8
<i>Scioto River.</i> Columbus, Ohio ⁴	110	17	2.9	24-27	2.2	1-8	2.5	0.7	<i>Congaree River.</i> Columbia, S. C.	37	15	1.7	7	— 0.1	16-18, 28-30 ³	0.4	1.8
<i>Miami River.</i> Dayton, Ohio.	77	18	2.0	18	0.7	1-4	1.0	1.3	<i>Wateree River.</i> Camden, S. C.	45	24	12.0	6	6.0	28-30	7.0	6.0
<i>Wabash River.</i> Mount Carmel, Ill.	50	15	0.9	8-18	0.6	1-5, 6, 21-24, 28 ³	0.7	0.3	<i>Waccamaw River.</i> Conway, S. C.	40	7	2.6	11, 12	1.0	19	1.9	1.6
<i>Licking River.</i> Falmouth, Ky.	30	25	2.0	19	0.2	1-4	0.7	1.8	<i>Savannah River.</i> Calhoun Falls, S. C.	347	15	2.7	20	2.0	27-30	2.2	0.7
<i>Kentucky River.</i> High Bridge, Ky.	117	17	10.2	18, 20-22	8.7	10-16	9.2	1.5	<i>Broad River.</i> Carlton, Ga.	30	11	3.1	4, 6	2.2	23-30	2.4	0.9
Frankfort, Ky.	65	31	6.7	18, 21-23	5.2	14-16	5.9	1.5	<i>Flint River.</i> Albany, Ga.	80	20	7.5	7	0.8	1, 2	3.8	6.7
<i>Clinch River.</i> Speers Ferry, Va.	156	20	0.2	18	-1.1	1, 10, 11	-0.6	1.3	<i>Chattohoochee River.</i> Oakdale, Ga.	305	18	3.0	6	0.7	2	1.4	2.3
Clinton, Tenn.	52	25	7.5	18	2.3	1, 11, 12	3.2	5.2	<i>Westpoint, Ga.</i>	239	20	3.5	5	2.0	1	2.5	1.5
<i>Holston River.</i> Bluff City, Tenn.	170	15	2.0	17	0.0	3, 4, 10, 11, 28 ³	0.3	2.0	<i>Eufaula, Ala.</i>	90	40	3.5	7	1.0	1, 2	2.3	2.5
Rogersville, Tenn.	103	14	2.6	19	1.2	2, 4, 5, 16	1.5	1.4	<i>Ocmulgee River.</i> Macon, Ga.	125	18	4.1	6	2.2	1	2.8	1.9
<i>French Broad River.</i> Asheville, N. C.	144	14	0.1	18	-0.7	1-3, 10-16 ³	-0.5	0.8	<i>Abbeville, Ga.</i>	50	11	6.4	8, 9	1.9	1, 2	3.8	4.5
<i>Hiccupee River.</i> Charleston, Tenn.	18	22	5.2	18	0.4	29, 30	1.1	4.8	<i>Oconee River.</i> Dublin, Ga.	79	20	3.8	6	0.3	1, 2	1.3	3.5
<i>Tennessee River.</i> Knoxville, Tenn.	635	29	2.5	19	0.0	1, 2	0.6	2.5	<i>Coosa River.</i> Rome, Ga.	271	30	2.0	6, 7	0.7	1, 2	1.2	1.3
Kingston, Tenn.	556	25	4.2	18	0.8	1, 2	1.3	3.4	<i>Gadsden, Ga.</i>	144	22	1.2	8	— 0.3	3	0.1	1.5
Chattanooga, Tenn.	452	33	6.6	19	0.8	1	2.0	5.8	<i>Alabama River.</i> Montgomery, Ala.	265	35	1.4	10, 11	0.3	1	0.8	1.1
Bridgeport, Ala.	402	24	4.0	20	0.0	1	1.0	4.0	<i>Selma, Ala.</i>	212	35	1.1	12	— 0.2	1, 2	0.6	1.3
Florence, Ala.	255	16	3.5	22	-0.4	1, 2	0.6	3.9	<i>Tombigbee River.</i> Tuscaloosa, Ala.	90	43	5.6	3	4.7	23-30	4.9	0.9
Riverton, Ala.	225	25	3.8	23	-1.7	1	0.0	5.5	<i>Sabine River.</i> Logansport, La.	180	25	5.6	14	3.2	8, 9	4.1	2.4
Johnsonville, Tenn.	95	24	4.3	24, 25	0.0	1, 2	1.6	4.3	<i>Neches River.</i> Orange, Tex.	10	7	0.9	1-5	0.4	26-30	0.6	0.5
<i>Arkansas River.</i> Wichita, Kans.	832	10	2.0	4	0.1	19, 20	0.8	1.9	<i>Rockland, Tex.</i>	110	20	0.7	8-10	0.3	5, 23-30	0.4	0.4
Webbers Falls, Ind. ^T	465	23	10.0	6, 7	2.8	3	4.6	7.2	<i>Beaumont, Tex.</i>	40	10	...	...	...	...	...	...
Fort Smith, Ark.	403	22	10.3	7	2.3	1, 2	4.7	8.0	<i>Trinity River.</i> Dallas, Tex.	330	25	10.2	2	2.0	26-30	3.2	8.2
Dardanelle, Ark.	256	21	9.8	9	1.6	3, 4	4.0	8.2	<i>Riverside, Tex.</i>	100	40	4.2	8	0.6	29, 30	1.7	3.6
Little Rock, Ark.	176	23	10.1	10	3.3	2, 3	5.2	6.8	<i>Liberty, Tex.</i>	42	25	6.7	15	3.8	30	5.1	2.9
<i>White River.</i> Newport, Ark.	150	26	1.2	8-12	0.2	29, 30	0.9	1.0	<i>Brazos River.</i> Kopperl, Tex.	369	21	1.0	16, 17	— 1.0	15	0.0	2.0
<i>Yazoo River.</i> Yazoo City, Miss.	80	25	— 1.9	17, 18	-2.5	1-11	-2.3	0.6	<i>Black Warrior River.</i> Waco, Tex.	301	22	3.9	8	2.5	30	3.2	1.4
<i>Red River.</i> Arthur City, Tex.	638	27	8.7	2	4.5	21-30	5.3	4.2	<i>Hempstead, Tex.</i>	215	40	1.8	8	— 0.5	30	0.5	2.3
Fulton, Ark.	515	28	10.8	6	4.2	29, 30	5.9	6.6	<i>Booth, Tex.</i>	76	39	4.0	1-16	2.4	30	3.5	1.6
Shreveport, La.	327	29	2.6	10	-1.9	20, 30	-0.5	4.5	<i>Colorado River.</i> Ballinger, Tex.	400	21	1.8	4	1.2	29, 30	1.4	0.6
Alexandria, La.	118	33	2.1	15	-0.6	30	0.6	.72	<i>Austin, Tex.</i>	214	18	1.7	7-10	1.3	30	1.5	0.4
<i>Ouachita River.</i> Camden, Ark.	304	39	4.4	1	3.8	29, 30	4.1	0.6	<i>Collins, Tex.</i>	100	24	7.6	5	5.6	26-30	6.3	2.0
Monroe, La.	122	40	2.8	1	1.4	26-30	1.6	1.4	<i>Red River of the North.</i> Moorhead, Minn. ⁸	418	26	8.6	25, 26	8.0	16-20	8.1	0.6
<i>Atchafalaya River.</i> Melville, La.	100	31	14.0	1	8.5	30	11.4	5.5	<i>Columbia River.</i> Umatilla, Oreg.	270	25	5.6	25	4.6	22	5.2	1.0
<i>Penobscot River.</i> Mattawamkeag, Me. ⁶	—	9.4	18-20	8.3	2	8.9	1.1	1.3	<i>Willamette River.</i> The Dalles, Oreg.	166	40	8.0	11	6.4	23	7.3	1.6
Montague, Me.	2, 6	15, 16	1.3	6, 7	1.8	1.3	—	1.3	<i>Sacramento River.</i> Red Bluff, Cal.	118	20	14.5	23	1.0	1	7.3	13.5
<i>Kennebec River.</i> Winslow, Me.	—	4.1	23	1.0	16	2.9	3.1	3.1	<i>Colorado River.</i> Sacramento, Cal.	12	15	9.2	13, 15, 23, 24	2.8	1	6.9	6.4
<i>Merrimac River.</i> Franklin Junction, N. H.	4.6	19	3.8	9, 29, 30	4.2	0.8	—	—	<i>Red River of the North.</i> Moorhead, Minn. ⁸	265	23	24.5	22	0.0	1, 2	7.5	24.5
Concord, N. H. ⁶	1.4	19, 20	0.9	16, 17	1.1	0.5	—	—	<i>Columbia River.</i> Umatilla, Oreg.	64	29	20.5	22	7.3	1, 2	14.1	13.2
Manchester, N. H.	3.8	1, 22	2.0	28	3.1	1.8	—	1.8	<i>Willamette River.</i> Portland, Oreg.	118	20	14.5	23	1.0	1	7.3	13

HAWAIIAN CLIMATOLOGICAL DATA.

By R. C. LYDECKER, Territorial Meteorologist.

Rainfall data for November, 1903.

Stations.	Elevation.	Amount.	Stations.	Elevation.	Amount.			
HAWAII.								
HILO, e. and ne.	Feet.	Inches.	MAUI—Cont'd.	Feet.	Inches.			
Waiakea	50	14.06	Haleakala Ranch	2,000	5.18			
Hilo (town)	100	15.69	Wailuku, ne.	250	2.35			
Puueo	85	15.69	LANAI.					
Kaumana	1,250	24.04	Keomuku	10	0.09			
Pepeekeo	100	14.26	OAHU.					
Hakalau	200	14.59	Punahou (W. B.), sw.	47	2.26			
Honohina	300	19.48	Kulaokahua (Castle), sw.	50	1.91			
Punohua	1,050	24.84	Makiki Reservoir	120	3.14			
Laupahoehoe	500	17.82	U. S. Naval Station, sw.	6	1.99			
Okukala	400	13.15	Kapiolani Park, sw.	10	0.65			
HAMAKUA, ne.			College Hills.	175	2.44			
Kukaiwa	250	11.61	Manoa (Woodlawn Dairy), c.	285	11.31			
Paauilo	300	10.71	Manoa (Rhodes Gardens)	360	14.72			
Paahau	300	12.24	Insane Asylum.	30	2.15			
Honokaa (Mill)	425	12.95	School street (Bishop), sw.	75				
Honokaa (Meincke)	1,100	18.72	Kamehameha School	485				
Kukuihaele	700	13.25	Nuuuanu (W. W. Hall), sw.	50	4.95			
KOHALA, n.			Nuuuanu (Wyllie street)	250				
Awini Ranch	1,100	14.68	Nuuuanu (Elec. Station), sw.	405	7.96			
Niulii	200	6.87	Nuuuanu (Luakaha), c.	850	18.49			
Kohala (Mission)	521	6.79	U. S. Experiment Station	350				
Kohala (Sugar Co.)	270	7.07	Kaliuila	1,150	7.90			
Hawi, Mill	700	6.68	Lanikai (Nahuina)	1,150				
Puakea Ranch	600	4.82	Tantalus Heights (Frear)	1,360	10.97			
Puuhue Ranch	1,847	2.11	Waipamano, ne.	25	3.76			
Wainae	2,720	4.55	Maunaawili, ne.	300	6.90			
KONA, w.			Kaneohe	100	3.56			
Huehue	2,000	1.59	Ahuimanu, ne.	350	8.36			
Holualoa	1,350	2.51	Kahakolu, n.	25				
Kaukahoku Leheula	3,500	3.27	Waiula	37				
Kainaliu	1,470	4.13	Wahiaawa	900				
Kealakekua	1,580	3.24	Ewa Plantation, s.	60	2.17			
Napoopo	25	2.35	U. S. Magnetic Station	45				
Hoopolua	1,650		Waipahu	200	0.90			
Puuaawaas Ranch	2,300		Moanalua	15	2.76			
Huehue	2,700	1.63	Pacific Heights	700				
KAU, se.			KAUAI.					
Kahuku Ranch	1,680	4.06	Lihue (Grove Farm), e.	200	1.99			
Honuapo	15	2.74	Lihue (Moloko), e.	300	2.54			
Naaelehu	650	2.54	Lihue (Kukaua), e.	1,000	5.31			
Hilea	310	3.40	Kealia, e.	15				
Pahala	850	4.15	Kilauea (Plantation), ne.	325	2.53			
Moauta	1,700		Kilaolei, n.	10				
Volcano House	4,000	9.85	Waioli	10				
PUNA, e.			Haena	15				
Olaa, Mountain View (Russel)	1,690		Waiawa	32	0.26			
Olas (Plantation)			Eleeli	150	0.57			
Kapoho	110	10.28	Wahiawa (Mountain)	3,000				
Pahoia	600	14.20	McBryde (Residence)	850	2.64			
MAUI.			Lawai (Gov. Road)	450				
Lahaina	40		Lawai, w.	225	3.02			
Waipae Ranch	700		Lawai, e.	800	2.82			
Kaupo (Mokulau), s.	285	5.23	Kolon	100	1.77			
Kipahulu, s.	308	7.20	Delayed October reports.					
Hana			Ewa Plantation	60	1.76			
Nabiku, ne	850	27.22	Hoopolua	1,650	4.70			
Nabiku	1,600		Palaha	850	1.25			
Haiku, n.	700	7.67	Kealia	15	3.05			
Kula (Erehwon), n.	4,500	1.00	U. S. Magnetic Station	45	1.13			
Kula (Waikaoa), n.	2,700	0.70	Kaukahoku Leheula	3,500	3.11			
Puonomelei, n.	1,400		Kainaliu	1,470	3.13			
Paia	180	2.83	Paia	180	3.49			

NOTE.—The letters n, s, e, w, and c show the exposure of the station relative to the winds.

GENERAL SUMMARY FOR NOVEMBER, 1903.

Honolulu.—Temperature mean for the month, 73.6° ; normal, 73.9° ; average daily maximum, 79.0° ; average daily minimum, 69.2° ; mean daily range, 9.8° ; greatest daily range, 15° (10th, 19th, and 27th); least daily range, 6° (12th and 21st); highest temperature, 82° (10th); lowest temperature, 63° (26th and 27th).

Barometer average, 29.990; normal, 29.957; highest, 30.10 (21st and 22d); lowest, 29.85 (27th and 28th); greatest 24-hour change, that is from any given hour of one day to the same hour on the next, .09 (15–16th and 20th–21st); lows passed this point, 11th to 14th and 26th to 28th, inclusive; highs, 1st to 9th, inclusive, 17th, 19th, and 21st to 24th, inclusive.

Relative humidity average, 72.8 per cent; normal, 75.5 per cent; mean dew-point, 63.7° ; normal, 65.6°; mean absolute moisture, 6.49 grains per cubic foot; normal, 6.93 grains.

Rainfall, 2.24 inches; normal, 5.13 inches; rain record days, 16; normal, 17; greatest rainfall in one day, 1.50 (from 9 a. m.

Meteorological Observations at Honolulu, November, 1903.

The station is at $21^{\circ} 18' N.$, $157^{\circ} 50' W.$ It is the Hawaiian Weather Bureau station Punahoa. (See fig. 2, No. 1, in the MONTHLY WEATHER REVIEW for July, 1902, page 365.) Hawaiian standard time is $10^{\text{h}} 30^{\text{m}}$ slow of Greenwich time. Honolulu local mean time is $10^{\text{h}} 31^{\text{m}}$ slow of Greenwich.

The pressure is corrected for temperature and reduced to sea level, and the gravity correction, -0.06 , has been applied.

The average direction and force of the wind and the average cloudiness for the whole day are given unless they have varied more than usual, in which case the extremes are given. The scale of wind force is 0 to 12, or Beaufort scale. Two directions of wind, or values of wind force, or amounts of cloudiness, connected by a dash, indicate change from one to the other. Rainfall for twenty-four hours is measured at 9 a. m. local, or 4:30 p. m., Greenwich time. The rain gage, 8 inches in diameter, is 1 foot above ground. Thermometer, 9 feet above ground. Ground is 43 feet and the barometer 50 feet above sea level.

Date.	Pressure at sea level.	Tempera-ture.	During twenty-four hours preceding 1 p. m. Greenwich time, or 2:30 a. m. Honolulu time.					
			Tempera-ture.		Means.		Wind.	
			Dry bulb.	Wet bulb.	Maximum.	Minimum.	Dew-point.	Relative humidity.
1	*	+	+	+	66	69	71	nne.
2	30.02	73	67.5	79	63.5	69	71	nne.-ne.
3	30.00	70	67.5	80	64.7	72	67	ne.
4	30.02	72	65.5	76	69	65.5	83	ne.
5	30.04	73	67	80	68	62.7	67	ne.
6	30.05	74	67.5	80	72	64.0	68	ne.
7	30.01	75	67.5	80	69	65.7	72	ne.
8	30.05	74	67	80	73	63.0	68	ne.
9	30.04	75	67	80	73	67.3	77	eñe.
10	30.03	68	61	74	64.0	66	70	ne.
11	30.03	75	67	82	65	65.5	73	ne.
12	30.03	75	66.5	80	72	62.7	65	ne.
13	29.93	73	67	80	74	61.7	62	ne.
14	29.90	70	68	81	71	63.0	65	ne.
15	29.92	75	71.5	79	70	67.3	80	nne.-eñe.
16	29.99	75	69	81	73	70.3	84	eñe.
17	30.00	71	67.5	79	72	66.3	73	ne.
18	30.00	71	63	77	70	60.5	67	ne.
19	30.02	66	63	78	68	59.7	66	ne.
20	29.99	64	62	79	64	61.3	71	ne.
21	30.00	72	65	78	64	62.5	76	ne.
22	30.06	70	64	76	70	61.7	70	ne.
23	30.06	72	64	77	69	60.0	67	ne.
24	30.00	67	64.5	77	70	60.7	67	ne.
25	29.99	57	64	78	67	63.3	77	ne.
26	30.00	63	61	79	66	62.0	75	sw.
27	29.93	65	63	77	63	62.0	80	w.-sw.
28	29.88	66	65	78	63	63.7	82	sw.
29	29.96	70	69	78	65	66.0	83	sw.
30	30.01	70	67	79	69	68.0	87	wsw.
31								
Sums.							3.5	
Means.	29.999	70.8	66.1	79.0	69.2	63.7	72.8	
Depart-ure..	+ .033				-1.9	-2.7		-2.89

Mean temperature for the month of November, 1903, $(6+2+9)+3=73.6^{\circ}$; normal is 73.9° . Mean pressure for the month of November, 1903, $(9+3)\div 2=29.990$; normal is 29.957 .

*This pressure is as recorded at 1 p. m., Greenwich time. +These temperatures are observed at 6 a. m., local, or 4:30 p. m., Greenwich time. \ddagger These values are the means of $(6+9+2+9)\div 4$. $\ddot{\circ}$ Beaufort scale.

Maximum thermometer set at 9 p. m. and minimum at 2 p. m., local time.

15th to 9 a. m. 16th); total at Luakaha, 18.49; normal, 10.16; at Kapiolani Park, 0.65; normal, 4.05.

The artesian well water level remained nearly stationary, rising but .04 of a foot, from 33.30 to 33.34 feet above mean sea level. This is doubtless due to the small amount of rainfall during October and November. The average November rise is about .5 of a foot. November 30, 1902, it stood at 33.90. The average daily mean sea level for the month was 9.99 feet, the assumed annual mean being 10.00 feet above datum; for November, 1902, it was 10.13.

Trade wind days, 25, (two of nne.); normal, 17; average force of wind during daylight, Beaufort scale, 1.3; average cloudiness, tenths of sky, 3.5; normal, 4.6.

Approximate percentages of district rainfall as compared with normal: Hawaii, Hilo district, 152 per cent; Hamakua, 215; Kohala, 155; Waimea, 148; Kona, 68; Kau, 56; Puna, 112; island of Maui, 52, excepting Haleakala Ranch, 103; island of Oahu, 60 per cent, excepting Luakaha, 186; island Kauai, 26 per cent.

The heaviest 24-hour rainfalls were at Kaumana, 9.02 inches (15th); Puuohua, 8.63 inches (15th), and Honokaa, 8.15 inches (22d), all on Hawaii.

The heaviest monthly rainfall reported was at Nahiku (850 elevation), Maui, 27.22 inches.

Temperature table for November, 1903.

Stations.	Elevation.	Mean max.	Mean min.	Cor. av'ge.	Highest.	Lowest.
	Feet.	°	°	°	°	°
Hilo	50	80.1	66.4	72.6	85	63
Pepeekeo	100	77.6	68.5	72.4	82	66
Kohala	521	76.2	66.0	70.4	81	62
Naalehu	1,903					
Waimea	2,730	73.4	59.2	65.6	80	54
Volcano House	4,000	71.9	53.0	61.8	80	48
Waikos	2,700	78.0	56.3	66.5	87	51
Keomoku	10	80.3	73.1	76.0		
W. R. Castle	50	78.6	69.7	73.5	82	62
Ewa Plantation	60	81.5	65.3	72.7	84	60

Kohala, dew-point, 65.7°; relative humidity, 81.3 per cent.

Ewa plantation, dew-point, 61.6°; relative humidity, 67.2 per cent; barometer average, 29.96.

The month closed with continued volcanic activity, that of Mauna Loa's summit crater, Mokuaweoweo, was reported at the end of the month as being about the same as when first visited in October. The crater of Haleumau in Kilauea, was discovered in eruption at 2:30 a. m. of the 25th, and activity has since continued. The lava lake at the end of the month was reported as being 300 by 125 feet in size and not more than 650 feet from the crater's summit. This crater is 1.95 miles wide and 2.93 miles long, containing an area of 4.14 square miles or 2650 acres.

There have been no earthquakes reported to this office, but a newspaper report gives one in the Kona and Kau districts on the 12th, followed by increased activity of Mokuaweoweo, and the steamer *Mauna Loa* reports a disturbance of the sea while the vessel was at anchor off Punaluu, Hawaii, on the 17th. The sea suddenly became churned up and disturbed to such an extent as to capsize one of the ship's boats lying alongside, throwing its occupants into the water, where, though they were natives, they maintained themselves with difficulty, and the ship itself was swung around from its former position. This disturbance is reported as lasting ten minutes. Later in the day a huge black cloud was seen to belch from the summit crater, followed by the usual column of white smoke and steam. High seas in the channels and heavy surf along the windward coasts have been the rule. Tidal waves were reported from Pelekunu, Molokai; Kahului and Honokohau, Maui, on the 29th. At the latter place one wave rose to a height of 30 feet as measured by the mark left by the sea on the pali, doing considerable damage. From Koholalele, Hawaii, comes a report of heavy seas, lasting some hours, which swept clean over the top of a 40-foot crane at the landing and carried enormous boulders some distance inland. On this same date a portion of the railroad track along the northern part of Oahu was washed away by high seas and the tide gage in the harbor of Honolulu recorded evidence of an unusual agitation. Whether the cause of these latter disturbances was local volcanic activity or the result of seismic disturbances at or around the Aleutian Islands, or unusually heavy weather in the North Pacific, is problematical, with the weight of evidence in favor of seismic origin.

Thunder at Honolulu on the 15th during the heavy showers of the afternoon of that date. This was the only rain to speak of for this district during the month, 1.50 inches falling at the Weather Bureau between 1 and 5 p. m. of a total of 2.24 inches for the month. Bright afterglows on several occasions and a 44-degree lunar halo on the evening of the 26th.

The rainfall throughout the group, with the exceptions of the northern and eastern exposures of the island of Hawaii, was considerably below the November normal, due to the unusual absence of southerly wind for this period, the small precipitation at southerly exposures being especially marked. The barometer average for the past five months has been slightly

above the normal, a condition likely to be followed by a winter of moderate rainfall.

Reports from other stations: Hilo and Pepeekeo, Hawaii, report a brilliant meteor on the evening of the 28th, passing from the south to a little east of north. Pepeekeo, wind north to east throughout the month, average force 1.4; dew six mornings; heavy surf, with the exception of a few days; snow on mountains 17th and a little still visible at the end of the month; reflection and smoke from volcano at intervals. Kohala, Hawaii, trade winds 1st to 26th, inclusive, variable balance of month. Waimea, Hawaii, fresh and strong northeast winds 1st to 18th, inclusive, light trades thereafter; reflection from volcano very bright last ten days; snow on mountains 15th and still visible on Mauna Kea at the end of the month; considerable cloudiness, and bright morning and afterglows throughout. Extremely high surf at Hilo 4th to 8th, inclusive.

MEXICAN CLIMATOLOGICAL DATA.

By Señor MANUEL E. PASTRANA, Director of the Central Meteorologic-Magnetic Observatory.

November, 1903.

Stations.	Altitude,	Mean barometer,*	Temperature.			Relative humidity.	Precipitation.	Prevailing direction.	
			Max.	Min.	Mean.			Wind.	Cloud.
	Feet.	Inches.	° F.	° F.	° F.	%	Ins.		
Chihuahua	4,684								
Guadalajara (Obs. del. Est.)	5,186	24.94	80.6	46.4	63.1	61	0.00	n.w.	
Guanajuato	6,640								
Leon (Guanajuato)	5,906	24.28	79.0	37.8	59.2	56	T.	ne.	
Mazatlan	25	29.91	83.8	67.1	77.0	75	0.00	n.w.	
Merida	50								
Mexico (Obs. Cent.)	7,472	23.08	76.6	38.3	55.6	55	0.04	ne.	ne.
Mexico (E. N. Agric.)	7,442								
Monterey (Semiario)	1,626								
Morelia (Seminario)	6,401								
Pachuca	7,959								
Puebla (Col. Cath.)	7,108	23.39	76.8	34.9	55.2	65	0.41	ene.	
Puebla (Col. d Est.)	7,118	23.33	78.4	33.4	55.8	60	0.17	e.	
Parral	24.59								
Salina Cruz	492	29.85	91.6	66.2	80.1	62	0.00	sw.	
Vera Cruz	29.97								
Zacatecas	8,015	22.56	77.4	34.5	55.4	53	0.07	e.	
Zapotlan	5,078								

*The monthly barometric means are reduced to the international standard of gravity.

CLIMATOLOGICAL DATA FOR JAMAICA.

Through the kindness of Mr. H. H. Cousins, chemist to the government of Jamaica and now in charge of the meteorological service of that island, we have received the following table in advance of the regular monthly weather report for Jamaica:

Comparative table of rainfall for November, 1903.

[Based upon the average stations only.]

Divisions.	Relative area.	Number of stations.	Rainfall.	
			Per cent.	Inches.
Northeastern division	25	24	8.94	11.19
Northern division	32	53	4.43	5.83
West-central division	26	23	6.27	5.68
Southern division	27	32	3.49	4.25
Means	100	213	5.78	6.74

The rainfall for November was therefore below the average for the whole island. The greatest rainfall, 25.89 inches, occurred at Moore Town, in the northeastern division, while 0.54 inch was recorded at the Public Works office, Kingston.

The temperature inside Savoy House on the morning of the 29th was 59°; on the 30th, 61°, and on December 1, 67°. At Brandon Hill, Montego Bay, the lowest temperature was 56.2°, at 6 a. m. on November 29. The same low temperature occurred on February 10, 1886. At Spring Valley, Green Island, the thermometer on the morning of the 29th registered 58°, and it never went above 66° for the day—very cold.

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